



Preface

About Influences. . .

John first began playing guitar at age 12 and had some of the typical influences that many other kids his age had at that time; Black Sabbath, Led Zeppelin, The Who, and Iron Maiden. As he progressed, he became drawn to players that really had a unique style; Alex Lifeson of Rush, Steve Howe of Yes, and Randy Rhoads from Ozzy Osbourne. When he heard Steve Morse's "The Bash," a burning country tune by the Dixie Dregs, he purchased every Dixie Dregs and Dregs album. Also, players like Al Di Meola, Allan Holdsworth and Stevie Ray Vaughan have been a never-ending source of inspiration.

Lessons and Berklee. . .

John never really took any formal guitar lessons prior to his studies at Berklee School of Music. He did study some classical based music theory during his last two years of high school, but spent the majority of the time developing technique and chops.

Berklee introduced whole new areas of musicianship such as arranging, sight singing, and jazz harmony. Jazz harmony provided chord structure and progressions that have since proved to be an invaluable resource for both composition and improvisation. Most importantly, studying music in such a disciplined environment taught John how to continue to learn, enabling him to continue to develop his level of musicianship throughout his life. There is an unlimited resource of materials to draw from and having the ability to absorb, understand and apply this information, provides any artists with the ability to grow infinitely. However, you have to seek out this type of information. John remembers classmates at Berklee who diligently applied themselves; at the library, in the listening rooms, and they always attended concerts and recitals. They continued to excel as a result of their dedication while other students who sat around, expecting all of this information to be spoon-fed to them, eventually left.

Writing with the Band. . .

The majority of the band's compositions are spawned from jam sessions; someone comes in with a riff, chord progression or groove, and everyone proceeds to develop it. Out of some of these jams, all of which are performed as the tape is rolling, many solid ideas start to happen and the band begins to work on arrangements. Not only does John function as the cornerstone for the band's innovative song structures, he also contributes many of the lyrics. He is constantly aware of the importance of the song's melodic and lyrical content, and how they contribute to the song as a whole.

It is fortunate that each of the band members shares the same influences; Rush, Yes, The Dregs, Genesis and Frank Zappa. Many of the attributes of Dream Theater's style, odd time signatures and experimental harmonies, are the natural result of these common influences.

On Practicing. . .

In order to maintain and develop technique during a given practice session, John subdivides his technical needs into four different categories and proceeds to study examples and exercises that pertain specifically to each of these categories. This workout consists of: 1. Scalar, or linear examples 2. arpeggios 3. legatos and 4. sweep picking.

John has extensive files containing information from instructional videos, books, lessons, etc., organized according to specific topics. If for example he comes across an arpeggio example in a magazine, he will rip it out and file it in the arpeggio section. He continuously updates and revises the contents in these files and logs them on a master list that he keeps handy. This gives him a vast resource to tap into when it comes time to practice. Instead of overwhelming himself with all of the materials he has filed over the years, John will sit down and customize a practice session each day. If he has about two hours to practice on a given day, he will find an example or exercise from each of these four categories and study each of them for thirty minutes. Two hours of this disciplined and highly productive approach will cover the entire topic of technique.

Equipment

Guitars: John uses five different custom Ibanez guitars made of basswood. Each guitar has a rosewood, 24 fret fretboard. The fret width is 61. The custom paint work was by Dan Lawrence. Two of these guitars are seven-string models, with the low 7th string tuned down to the note B.

Strings: John uses D'Addario strings, exclusively. The string gauges on the six-string guitars go from .09 to .46. The low B string on the seven-string guitars has a diameter of .56.

Pickups: Each guitar features two DiMarzio humbuckers; one in the neck and one in the bridge, direct-mounted into the body. The pickups were custom designed to John's specifications by Steve Blucher.

Picks: Jim Dunlop Jazz III for electric playing and a Jim Dunlop .71 mm for acoustic. The lighter gauge is ideal for strummed passages.

Rack: Everything in the rack (designed by Mark Snyder) is wired through a multi-pin system that goes directly to a Mesa/Boogie Abacus pedal board, including the Noise-Gate, Crybaby, Volume and Parameter pedals. This makes his live set-up as hassle-free as possible. The rack also has an Alesis Data Disk that allows you to save, or re-load any midi programs for the Lexicon PCM70, T.C. Electronics 2290, and the pre-amps. John programmed many different patches that he uses to vary his clean and distorted tone using delays, choruses and other effects. A parameter pedal varies the amount of reverb or delay during solos or other sections in real time. This enables him to instantly reduce these effects during faster passages to avoid washing out the sound.

Pre-Amps: Incorporating a switching system into a custom designed rack-mounted set-up, allows John to choose among three different pre-amps: Two Triaxis pre-amps and a Mesa/Boogie Mark IIC Plus.

Speaker Cabinets: Mesa/Boogie speaker cabinets loaded with Celestion vintage 30-watt speakers.

Intro Music

To start things off, here's a transcription of an extended jam that showcases many of the techniques which will be discussed throughout this book. This was recorded live with Dream Theater's John Myung (bass), Mike Portnoy (drums) and Kevin Moore (keyboards).

*N.C.(Am)

A.H.
(8va)

(fade in)
A.H.

TAB

3 (3) (3)

8 10 8 12 10 (10) 7 8 8 7

*Tonality implied by rhythm section (throughout)
A.H. Pitch: C#

TAB

(7) 9 7 8 8 7 9 9 7 9 (9) 5 7 4 6 7 5 7 8 5 8 7 5 8 5 7 8

TAB

5 8 7 5 8 7 (7) (7) 8 5 7 8 5 5 5 7 5 7 9 5

P.M. - 1

P.M. -> semi-harm.

T
A
B

(5) 5 7 5 5 7 7 7 (7) 5 5 7 7 5 5 7 5 7 9 5 7 (7) 5 7 5 7

grad. release P.M.

T
A
B

(7) 5 7 8 (8) (8) 5 8 5 7 7 5 7 7 5 7 5 (5) (5) 5 5 7 7 6 5 3 5

T
A
B

3 5 7 5 7 5 7 9 8 9 10 9 7 10 10 7 8 9 10 8 10 7 8 10 7

T
A
B

(7) 9 7 8 10 10 8 7 10 7 8 10 8 7 10 8 7 10 9 8 7 9 7 9 7 5 7 7

T
A
B

7 5 7 8 5 8 7 5 7 8 5 8 7 5 8 5 7 8 7 5 8 7 5 7 5 4 7 6 5 4 7 6 5

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8 Intro Music

8 Intro Music

8 Intro Music

8 Intro Music

8 Intro Music

14 16 17 14 16 17 15 14 12 11 11 9 9 7 9 8 10 7

8 7 10 9 12 (12) (12) 10 12 10 8 10 8 10 12 10 8 10 8 10 12 10 8 10 9

12 7 10 9 12 15 17 (17) 15 17 19 17 15 17 15 17 19 17 15 17 15

17 19 17 15 17 15 17 19 17 15 18 13 15 12 15 12 15 17 15 12 15 13 15 17 15 12 15 13 15 (15) 15 12

15 12 15 12 14 12 15 12 15 14 12 14 14 12 15 (15) 0 10 12 17 15 12 17 15 12 17 15 12 17 15 12 17

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grad. bend

(Dm)

"Hi, my name is John Petrucci..."

w/bar (next 2 bars)

trem. bar 6

(Am)

The musical notation for the guitar solo is presented on a standard five-line staff. The key signature is one sharp (F#), and the time signature is 12/8. The solo consists of a single melodic line. It begins with a treble clef and a key signature of one sharp. The notation includes various note values, including eighth and sixteenth notes, and rests. The solo is divided into four measures, each containing a sixteenth-note triplet, indicated by a '6' above the notes. The first three measures are on the treble staff, and the fourth measure is on the bass staff. The solo concludes with a final note on the treble staff.

The musical notation for the guitar solo is presented in two systems. The first system shows a melodic line on a single staff with a treble clef. It consists of four measures, each containing a sixteenth-note triplet. The notes are: G4 (natural), A4 (sharp), B4 (natural); G4 (natural), A4 (sharp), B4 (natural); G4 (natural), A4 (sharp), B4 (natural); and G4 (natural), A4 (sharp), B4 (natural). The second system is a tablature (TAB) for the same solo, showing the fret numbers for the six strings. The fret numbers are: 17, 18, 19, 17, 19, 18, 17, 18, 19, 19, 18, 17, 18, 19, 17, 18, 19, 17, 18, 19, 17, 19, 18.

The musical notation for 'The Six Notes' is shown on a single staff. It consists of four measures, each containing a sixteenth-note triplet. The notes in each triplet are G4 (one sharp), A4 (two sharps), B4 (three sharps), C5 (four sharps), D5 (five sharps), and E5 (no sharps or flats). The first measure has a '6' below it, indicating the fret number for the first note. The second measure has a '6' below it, indicating the fret number for the first note. The third measure has a '6' below it, indicating the fret number for the first note. The fourth measure has a '6' below it, indicating the fret number for the first note.

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First system of guitar music notation. The top staff is a treble clef with a key signature of one sharp (F#). It contains a sequence of eighth notes, mostly on the 17th and 19th frets, with some accidentals. Below the staff is a six-string guitar tablature with fret numbers 17, 19, 20, 17, 20, 19, 17, 19, 20, 17, 20, 19, 17, 20, 17, 20, 17, 19, 17.

Second system of guitar music notation. The top staff continues the melodic line with eighth notes and some ties. The tablature below includes fret numbers 20, 17, 20, 17, 19, 17, 20, 17, 20, 17, 17, 22, 17, 22, 17, 19, 17, 22, 17, 20, (22), (22), 20, 17, 20, 20, 17, 19, 17, 20, 17. It also includes the instruction "grad. release" with a dashed line and a "2" above it.

Third system of guitar music notation. The top staff features eighth notes with some ties and a triplet of eighth notes. The tablature below includes fret numbers 20, 19, 17, 20, 17, 19, 20, 20, 20, 20, (20), 20, 20, 20, (20), 20, (20), 19, (19), 20, 17, 19. It includes fingerings "1" and "1/2".

Fourth system of guitar music notation. The top staff includes eighth notes, a triplet, and a wavy line indicating vibrato. The tablature below includes fret numbers 20, 17, 20, 17, 20, 17, 19, (19), (19), (19), (19), 16, 17, 19, 17, 19, 20, 17, 20, 19, 17, 20, 17, 19. It includes the instruction "grad. release" and "wide vib." with a wavy line.

Fifth system of guitar music notation. The top staff continues the melodic line with eighth notes and ties. The tablature below includes fret numbers 20, 19, 19, 20, 19, 17, 20, 19, 17, 20, 19, 18, 17, 19, 17, 19, 17, 19, 17, 16, 17, 18, 18, 19, 15, 16, 17, 19, 17, 16, 17, 19.

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Musical notation system 1: Treble clef, 7/8 time signature. The staff contains a melodic line with triplets and sixteenth notes. Below the staff is a TAB system with three lines (T, A, B) and fret numbers.

TAB: 16 17 19 15/16 17 14 16 15 14 17 17 (17) 14 15 16 17 14 15 16 17

Musical notation system 2: Treble clef. The staff contains a melodic line with sixteenth notes and slurs. Below the staff is a TAB system with three lines (T, A, B) and fret numbers.

TAB: 14 15 16 17 14 15 16 17 12 13 14 15 12 13 14 15 11 12 13 14 12 15 15

Musical notation system 3: Treble clef. The staff contains a melodic line with triplets, sixteenth notes, and slurs. Below the staff is a TAB system with three lines (T, A, B) and fret numbers.

TAB: 15 (15) 15 (15) 13 12 15 12 14 14 14 12 14 14 12 11 12 12 14 14 11 4 12 (12) (12)

Musical notation system 4: Treble clef, (Dm) chord marking. The staff contains a melodic line with slurs and triplets. Below the staff is a TAB system with three lines (T, A, B) and fret numbers.

TAB: 10 12 10 12 13 12 15 12 13 12 12 9 10 9 12 (12) 9 10 9 12 8 7

Musical notation system 5: Treble clef. The staff contains a melodic line with a triplet and a 'Fade' marking. Below the staff is a TAB system with three lines (T, A, B) and fret numbers.

TAB: (7) 8 10 7 10 9 7 10 7 9 10 12 8 9 10 9

Part I

Warm-Up Exercises

(Left Hand)

This section is comprised of a series of exercises that focus on the stretching and independence of the left hand. The goal for this type of exercise is not to develop mega-speed, but rather to simply warm up the left hand, making it easier and more comfortable to perform more difficult technical tasks during a practice session, rehearsal or gig.

The first installment from this series of exercises deals with “mirror shapes.” These types of fingerboard shapes involve each of the left hand fingers in order to equally develop the strength and coordination of each finger while navigating through a handful of permutations of the exercise’s original starting pattern. All four fingers are arranged in a manner that is exactly opposite the original pattern (like a mirror!).

Example 1 (Part 1)

Walking through Part 1 of the first exercise, notice how the two outside fingers (1 and 4) remain stationary, while the two inside fingers are reversed (beat 2). Next, the two inside fingers (2 and 3) remain stationary, while the two outside fingers are reversed (beat 3). To achieve a perfect “mirror image” of the original starting pattern, simply reverse the two inside fingers again (beat 4). This exercise is then transferred to the next lower string group and repeated.

Freely

T
A
B

10 11 12 13 10 11 12 13 10 11 12 13 10 11 12 13 10 11 12 13

T
A
B

10 11 12 13 10 11 12 13 10 11 12 13 10 11 12 13 10 11 12 13

Example 1 (Part 2)

The second part of this exercise begins with the left hand in basically the same position as it was at the beginning of the third bar of the previous example. However, this pattern is varied slightly with the incorporation of a stretch between the 1st and 2nd fingers. Here, fingers 2 - 4 remain stationary, while the 1st finger reaches down 1/2 step to the 9th fret. The exercise is then performed in an identical manner to Part 1, this time from the lowest string group to the highest.

Freely

Example 1 (Part 2) musical notation. It consists of two systems. Each system has a treble clef staff with a key signature of one sharp (F#) and a 4/4 time signature. The first system contains two measures of music. The second system contains two measures of music. Below each system is a fretboard diagram with three strings labeled T (Treble), A (Alto), and B (Bass). The fret numbers for the first system are: Measure 1 (T: 13, A: 11, B: 9), Measure 2 (T: 13, A: 11, B: 9). The fret numbers for the second system are: Measure 1 (T: 13, A: 11, B: 9), Measure 2 (T: 13, A: 11, B: 9).

Example 1 (Part 3)

In Part 3 of this exercise, the left hand fingers are arranged in a manner similar to the beginning of the third bar in Part 2, the only variation being a stretch between the 2nd and 3rd fingers. Here, fingers 1, 3 and 4 remain stationary, while the 2nd finger reaches down 1/2 step to the 10th fret.

Freely

Example 1 (Part 3) musical notation. It consists of two systems. Each system has a treble clef staff with a key signature of one sharp (F#) and a 4/4 time signature. The first system contains two measures of music. The second system contains two measures of music. Below each system is a fretboard diagram with three strings labeled T (Treble), A (Alto), and B (Bass). The fret numbers for the first system are: Measure 1 (T: 13, A: 10, B: 9), Measure 2 (T: 13, A: 10, B: 9). The fret numbers for the second system are: Measure 1 (T: 13, A: 10, B: 9), Measure 2 (T: 13, A: 10, B: 9).

Example 1 (Part 4)

The final part of this exercise involves a stretch between fingers 3 and 4. At the conclusion of Part 4, the entire exercise (Parts 1–4) can then be repeated 1/2 step lower from its original starting point by repositioning the left hand in a manner similar to the third bar of Part 4, and then lowering the 4th finger 1/2 step so each finger is again one fret apart as in the first bar of Part 1.

Freely

The musical notation shows a melodic line in treble clef, 4/4 time, with a key signature of one sharp (F#). The fretboard diagram below it shows the positions of the thumb (T), index (A), middle (B), and ring (B) fingers across the strings and frets. The diagram is divided into two measures, each with four bars of fret positions.

Measure	Bar	T	A	B	B
1	1	9	10	11	13
	2	9	10	11	13
	3	9	10	11	13
	4	9	10	11	13
2	1	9	10	11	13
	2	9	10	11	13
	3	9	10	11	13
	4	9	10	11	13

The musical notation shows a melodic line in treble clef, 4/4 time, with a key signature of one sharp (F#). The fretboard diagram below it shows the positions of the thumb (T), index (A), middle (B), and ring (B) fingers across the strings and frets. The diagram is divided into two measures, each with four bars of fret positions.

Measure	Bar	T	A	B	B
1	1	9	10	11	13
	2	9	10	11	13
	3	9	10	11	13
	4	9	10	11	13
2	1	9	10	11	13
	2	9	10	11	13
	3	9	10	11	13
	4	9	10	11	13

Example 2 (Part I)

This second exercise is a variation of the first in that the chord shapes are strummed as opposed to arpeggiated. It also makes use of a "double-stretch." The primary chordal figure is similar to that of the first bar of Example 1 (Part I), but here the 1st finger is lowered 1/2 step to B (9th fret of 4th string) and the 4th finger is raised 1/2 step to F# (14th fret of 1st string), thus the "double-stretch." The left hand fingers are then shifted in exactly the same manner as they were in the previous exercise.

Freely

The musical notation shows a series of chords in treble clef, 4/4 time, with a key signature of one sharp (F#). The fretboard diagram below it shows the positions of the thumb (T), index (A), middle (B), and ring (B) fingers across the strings and frets. The diagram is divided into two measures, each with four bars of fret positions.

Measure	Bar	T	A	B	B
1	1	14	12	11	9
	2	14	12	11	9
	3	14	12	11	9
	4	14	12	11	9
2	1	14	12	11	9
	2	14	12	11	9
	3	14	12	11	9
	4	14	12	11	9

Example 2 (Part 2)

For the final variation of this exercise, a stretch occurs between each of the left hand fingers. If this stretch, or any of the earlier stretches are a little uncomfortable, try moving the entire exercise up to a higher region on the fingerboard where the frets are closer together. After finding an area that is comfortable, begin moving the exercise downward, gradually increasing the amount of stretching your left hand will have to endure.

Freely

T	14	14	8	8	14	14	8	8	14	14	8	8
A	12	10	10	12	12	10	10	12	12	10	10	12
B	8	8	14	14	8	8	14	14	8	8	14	14

Example 3

Once comfortable with the earlier examples, Example 3 should be the next challenge. In this exercise, some of the previous chordal shapes are stretched out so that the left hand is forced to cover the entire width of the fingerboard. To accomplish this, the 2nd and 5th strings are skipped, forcing the left hand fingers to grab the familiar chord shape on the 6th, 4th, 3rd and 1st strings. This figure is then played arpeggio style and permutedated using the same "mirror image" approach encountered previously. The stretches involved also get increasingly more difficult as the exercise progresses.

Freely

T	10	10	7	7	11	11	6	6
A	8	9	9	8	8	9	8	9
B	7	7	10	10	6	6	11	11

T	11	11	5	5
A	7	9	9	7
B	5	5	11	11

Part II

Warm-Up Exercises

(Right Hand)

Now that the left hand is warmed up, it's time to give it a rest and focus on the right hand. The exercises that follow are based on the arpeggio figure depicted below which is derived from a familiar moveable major barre chord shape with the root on the 6th string, and an added 3rd on the 1st string. In the case of an A triad (spelled 1 [A] 3 [C#] 5 [E]), the 3rd is C#. The figure itself is two bars in length and is moved along the fingerboard to imply the chords A, C, E, C#, G, B and F#.

The intervallic string skips in this exercise require precise articulation and pickhand efficiency. This becomes particularly difficult when using alternate picking (consistent alternation between down- and up-strokes) beginning with a down-stroke.

In order to be comfortable using alternate picking in any situation that may arise, it is recommended that any exercise practiced to perfection using alternate picking beginning with a down-stroke should also be practiced starting with an upstroke. This forces the right hand to become equally adept at picking any arrangement of notes. Play the primary figure of Example 4 and see how reversing the picking trips up its picking potential.

Example 4

System 1: Chords A and C

Notes: A (1st string, 1st fret), C# (2nd string, 2nd fret), E (3rd string, 3rd fret), A (4th string, 4th fret), C# (5th string, 5th fret), E (6th string, 6th fret).
 Chord C: C (1st string, 3rd fret), E (2nd string, 4th fret), G (3rd string, 5th fret), C (4th string, 6th fret), E (5th string, 7th fret), G (6th string, 8th fret).

Picking: □ V □ V *simile*

System 2: Chords E and C#

Notes: E (1st string, 5th fret), G# (2nd string, 6th fret), B (3rd string, 7th fret), E (4th string, 8th fret), G# (5th string, 9th fret), B (6th string, 10th fret).
 Chord C#: C# (1st string, 5th fret), E (2nd string, 6th fret), G# (3rd string, 7th fret), C# (4th string, 8th fret), E (5th string, 9th fret), G# (6th string, 10th fret).

G B

T
A
B

3 5 4 3 4 5 7 9 8 9 7 8 11 8 7 9 8 9 7

F#

T
A
B

2 4 4 3 4 2 3 2 6 3 2 4 3 4 4 2

Example 4 (Variation 1)

Create variations of this exercise by playing each of the notes from the arpeggio more than one time. In the first variation, each note is played twice in a steady eighth-note rhythm using alternate picking beginning with a down-stroke. As discussed earlier, as a means of making an exercise even more challenging, use alternate picking starting with an up-stroke instead of a down-stroke. To make this exercise as interesting as possible, try playing through the entire chord sequence using this new variation.

□ V □ V □ V □ V simile

T
A
B

5 5 7 7 6 6 7 7 5 5 6 6 5 5

T
A
B

9 9 6 6 5 5 7 7 6 6 7 7 7 7 5 5

Example 4 (Variation 2)

In this next variation, each note from the arpeggio is played three times. This generates a handful of eighth-note triplets, or three notes per beat. Because there are an odd number of notes per beat, this makes it a little tricky when it comes to alternate picking — especially when starting with an up-stroke.

Example 4 (Variation 3)

The final variation involves four notes per beat, or 16th notes. Again strive to consistently alternate pick strokes, picking down, up, down, up, etc. Repeat the entire exercise again reversing the picking; up, down, up, down strokes.

Part III

Warm-Up Exercises

(Synchronization of Both Hands)

Example 5 (Part 1)

After focusing on the right and left hands individually, the next step is to work on the synchronization of both hands by practicing exercises where each is implemented equally. The first exercise involves some of the "mirror shapes" discussed earlier, and alternate picking through string skips similar to those encountered in Example 3. This challenges both hands because the pick needs to choose the correct string to strike, and the left hand fingers need to be there to fret the note at the exact moment it is struck. This is called "efficiency of motion." This exercise should be taken all the way up to the 12th fret or higher.

Example 5 (Part 2)

Example 5 (Part 2) is a descending, retrograde of Part 1. Instead of beginning the pattern with the 1st finger on the 6th string, the pattern starts on the 1st string with the 4th finger. Again, a one-bar pattern is used and repeated as it descends chromatically. The higher the starting point for this exercise, the more of the fingerboard both hands will have to traverse, providing a thorough addition to any warm-up routine. To further hone picking chops, try performing both parts of this exercise using alternate picking beginning with an up-stroke as discussed in Example 4.

Example 6 (Part 1)

This example uses the same four-note shape but re-arranged to provide a much more complex workout for both hands because of the string skips. Once the first bar is under control, start moving it up chromatically to the higher frets. Note that the fingering is consistently 1 - 3 - 4 - 2.

Example 6 (Part 1) is a musical exercise in 4/4 time. It consists of two systems of music. The first system has two measures. The second system has three measures. Each measure contains a treble clef staff with a four-note shape and a bass clef staff with a four-note shape. The fingering for the treble staff is 1 - 3 - 4 - 2, and for the bass staff is 1 - 3 - 4 - 2. The exercise is marked with a 'V' and a 'simile' symbol. The first measure of the first system is marked with a 'V' and a 'simile' symbol. The first measure of the second system is marked with a 'V' and a 'simile' symbol. The first measure of the third system is marked with a 'V' and a 'simile' symbol.

Example 6 (Part 2)

Part 2 is a retrograde of Part 1 descending chromatically. Note that the fingering is consistently 4 - 2 - 1 - 3.

Example 6 (Part 2) is a musical exercise in 4/4 time. It consists of two systems of music. The first system has two measures. The second system has three measures. Each measure contains a treble clef staff with a four-note shape and a bass clef staff with a four-note shape. The fingering for the treble staff is 4 - 2 - 1 - 3, and for the bass staff is 4 - 2 - 1 - 3. The exercise is marked with a 'V' and a 'simile' symbol. The first measure of the first system is marked with a 'V' and a 'simile' symbol. The first measure of the second system is marked with a 'V' and a 'simile' symbol. The first measure of the third system is marked with a 'V' and a 'simile' symbol.

Part IV

Technique

(Speed and Accuracy)

In order for any artist to reach their own creative vision, it is essential that the performer develop technique. This can be cultivated by meticulous study of the rudiments unique to their instrument. Such disciplined learning is a fundamental requirement for any performer that wishes to play with a high degree of competency and control. One area most noticeably affected by technique is the ability or inability to play rapid passages with precision. This section explores technical exercises used to specifically develop this ability.

One way to develop speed is to set and achieve a series of short-term goals. In order to set these goals, measurements of speed must be understood. That's where using a metronome comes into play. A metronome, in addition to being an invaluable aid in developing your sense of time, is also a great tool for monitoring your progress.

Example 7

Memorize the A major scale in the 4th position. In the forthcoming musical examples, notes from this fingering will be used to demonstrate many ways to incorporate a metronome into a practice session.

Example 7 musical notation showing the A major scale in 4th position. The staff includes a treble clef, key signature of two sharps (F# and C#), and a 4/4 time signature. The scale is written as a single line of eighth notes. Below the staff are three lines for fretting hand (T, A, B) with fingerings: T (5, 7, 4, 5, 7, 4, 6, 7), A (4, 6, 7, 5, 7, 4, 5), and B (5, 7, 4, 5, 7, 4, 6, 7). The word "simile" is written below the staff.

Example 8 (Part 1)

Set the metronome to click at a rate of 66 beats per minute. Play the A major scale in sync with the metronome one note per beat (quarter notes). Although this may seem like a relatively slow tempo, trying to time the delivery of each note precisely with each click may come as a surprising challenge. This exercise will point to some improvements that may need to be made insofar as time feel is concerned. Also, this pulse will have to be maintained when advancing to smaller rhythmic divisions of the beat. In each of these examples, make sure that strict alternate picking is maintained throughout.

Example 8 (Part 1) musical notation showing the A major scale in 4th position. The staff includes a treble clef, key signature of two sharps (F# and C#), and a 4/4 time signature. The scale is written as a single line of quarter notes. Below the staff are three lines for fretting hand (T, A, B) with fingerings: T (5, 7, 4, 5, 7, 4, 6, 7), A (4, 6, 7, 5, 7, 4, 5), and B (5, 7, 4, 5, 7, 4, 6, 7). The word "simile" is written below the staff.

Example 8 (Part 2)

Obviously, you can increase the speed by increasing the tempo, but you can also bring up speed by subdividing each beat into smaller parts. The more you divide the beat the faster you play.

Play the A major scale at double the speed by playing two notes for each beat; one note on the beat (down-beat) and one note in the middle of the beat (up-beat). Rhythmically, you're subdividing the quarter note into two equal parts called eighth notes.

Musical notation for Example 8 (Part 2) in A major (F# and C#), 4/4 time. The melody consists of eighth notes. The bass line includes fingerings: 5, 7, 4, 5, 7, 4, 6, 7, 4, 6, 7, 5, 7, 4, 5.

Example 8 (Part 3)

Subdividing the quarter note into three equal parts results in eighth note triplets. One obstacle you will encounter is how the pattern of up-strokes and down-strokes reverses with each beat. If you play the first down-beat with a down-stroke then the next down-beat will be played with an up-stroke.

Musical notation for Example 8 (Part 3) in A major (F# and C#), 4/4 time. The melody consists of eighth note triplets. The bass line includes fingerings: 5, 7, 4, 5, 7, 4, 6, 7, 4, 6, 7, 5, 7, 5, 7, 6, 4, 7, 6, 4, 7, 5, 4, 7, 5.

Example 8 (Part 4)

Sixteenth notes subdivide the beat into four equal parts by dividing each eighth note in half.

Musical notation for Example 8 (Part 4) in A major (F# and C#), 4/4 time. The melody consists of sixteenth notes. The bass line includes fingerings: 5, 7, 4, 5, 7, 4, 6, 7, 4, 6, 7, 5, 7, 4, 5, 4, 7, 5, 7, 6, 4, 7, 6, 4, 7, 5, 4, 7, 5, 4, 5, 7.

Musical notation for Example 8 (Part 4) in A major (F# and C#), 4/4 time. The melody consists of sixteenth notes. The bass line includes fingerings: 4, 5, 7, 4, 6, 7, 4, 6, 7, 5, 7, 4, 5, 4, 7, 5, 7, 6, 4, 7, 6, 4, 7, 5, 4, 7, 5, 4, 5.

Example 8 (Part 5)

Sixteenth-note triplets subdivide the beat into six parts by either dividing eighth notes into three parts or dividing eighth-note triplets in half.

Example 8 (Part 5) musical notation. It consists of three systems, each with a treble clef staff and a three-part guitar tablature (T, A, B). The key signature is two sharps (F# and C#), and the time signature is 4/4. The notation features sixteenth-note triplets, indicated by a '6' above the notes. The first system shows a sequence of eighth notes and eighth-note triplets. The second system continues the sequence with more eighth notes and eighth-note triplets. The third system concludes the sequence with a final eighth note and a quarter rest.

Example 8 (Part 6)

The last subdivision in this series of examples is 32nd notes (eight notes per beat). Remember, even though this is much faster than what was played in Part 1, the actual pulse hasn't changed, only the division of the pulse has.

Example 8 (Part 6) musical notation. It consists of two systems, each with a treble clef staff and a three-part guitar tablature (T, A, B). The key signature is two sharps (F# and C#), and the time signature is 4/4. The notation features 32nd notes, indicated by a '4' above the notes. The first system shows a sequence of eighth notes and eighth-note triplets. The second system concludes the sequence with a final eighth note and a quarter rest.

Example 9

Once you achieve a certain level of confidence playing the different subdivisions to a metronome, it's time to work on developing accuracy at high speeds. The basic procedure is to start with a slow tempo on the metronome, play a given exercise as many times as it takes to master it at that tempo, gradually increase the metronome speed (approximately 8 beats per minute), and repeat the exercise until it is flawless. Continue to increase the speed of the metronome and practice the exercise until you reach the desired tempo.

The exercise that follows incorporates chromatics (successive half steps) into a four-note-per-string pattern played in steady 16th notes (four notes per beat). Developments 1A - D are variations of this exercise demonstrating the use of the metronome to achieve your goal tempo. Although the fingerings are different in many of the developments, they are still the same basic exercise presented in this example transposed up to higher positions.

Example 9 (Development 1A)

Accent the down-beat while making sure each group of 16th notes falls evenly between metronome clicks. This will clearly define the subdivision of 16th notes. As things get faster, this accent will help function as a reference point to clearly indicate where each beat should occur.

Example 9 (Developments 1B - D)

This next series of developments continue to move the original exercise to higher positions. Development 1B is demonstrated on the recording at 176 beats per minute. Development 1C, which immediately follows in the audio, is identical to the last four bars of Development 1B but played at 184 beats per minute. Development 1D demonstrates these exact same four bars with distortion at a tempo of 200 beats per minute.

The image shows a musical score for the song "The Rose Tree". It consists of two staves. The top staff is a treble clef with a 4/4 time signature. The bottom staff is a tablature for a guitar, with the letters "T", "A", and "B" indicating the strings. The music is written in G major, with a key signature of one sharp (F#). The melody is a simple, catchy tune. The tablature uses numbers 12, 13, 14, and 15 to indicate fret positions. The score is divided into two systems by a double bar line. The first system contains the first two measures of the melody. The second system contains the next four measures. The tablature is written below the melody, with the numbers 12, 13, 14, and 15 corresponding to the fret positions of the notes. The letters "T", "A", and "B" are placed above the first three measures of the tablature, indicating the strings to be played.

The musical score for "The Rose Tree" is presented in two systems. The first system features a treble clef staff with a key signature of one flat (B-flat). The melody is written in a single line, starting on a G4 and ending on a G4. The second system shows a three-part vocal arrangement for Tenor (T), Alto (A), and Bass (B). The Tenor part starts on a G4 and ends on a G4. The Alto part starts on a G4 and ends on a G4. The Bass part starts on a G3 and ends on a G3. The lyrics "The Rose Tree" are written below the vocal parts.

20 19 18 17

20 19 18 17

20 19 18 17

20 19 18 17

16 17 18 19 18 17 16 15

18 17 16 15

18 17 16 15

14

Example 9 (Development 2)

If at any point you feel the execution of an exercise is not as clean and precise as desired, back the metronome down to a slower speed to re-establish comfort. Development 2 adds similar four-note-per-string patterns to Developments 1A - B with different string sets and different positions. The recording is demonstrated at about 170 beats per minute.

[illegible]

The musical score is written for guitar. The treble clef staff has a key signature of one sharp (F#). The melody consists of 12 measures. The tablature below the staff is divided into two systems by a vertical line. The first system contains measures 1 through 6, and the second system contains measures 7 through 12. The tablature lines are labeled T, A, and B from top to bottom. The fret numbers are as follows:

Measure	T	A	B
1	16	17	18
2	18	19	18
3	18	17	16
4	16	15	18
5	18	17	16
6	15	18	17
7	14	15	16
8	16	17	14
9	17	14	15
10	17	16	14
11	17	15	16
12	17	14	15

The musical score for 'The Rose Tree' is presented on a grand staff. The top staff is a treble clef with a key signature of one sharp (F#). The melody consists of a series of eighth and sixteenth notes, with some measures containing beamed sixteenth notes. The bottom staff is a bass clef with a key signature of one sharp (F#). The bass line consists of a series of eighth and sixteenth notes, with some measures containing beamed sixteenth notes. The score is divided into two systems by a double bar line. The first system contains measures 1 through 8, and the second system contains measures 9 through 16. The tempo is marked 'Allegretto' and the time signature is '3/4'.

The image displays a musical score for the song "The Sound of Silence" by Simon & Garfunkel. It features a treble clef and a key signature of one sharp (F#). The melody is written on a single staff with a treble clef. Below the staff is a guitar tablature (TAB) line with fret numbers 18, 17, 16, 15, 18, 17, 16, 15, 19, 18, 17, 16, 19, 18, 17, 16. The tablature is written on a six-line staff, with the letters T, A, and B stacked vertically on the left side. The melody consists of a series of eighth notes, some with accidentals (sharps and flats) and some with a 'v' marking above them. The tablature corresponds to the fret positions for the notes in the melody.

The first staff of music is written on a five-line treble clef. It contains a sequence of 14 notes, each with a stem pointing downwards. The notes are: G4 (natural), A4 (natural), Bb4, C5, D5, Eb5, F5, G5, Ab5, A5, Bb5, C6, D6, and Eb6. There are dynamic markings: an accent (>) above the first note, and accents (>) above the 11th, 12th, and 13th notes. The staff is divided into four measures by vertical bar lines.

T
A
B

18 17 16 15 14 15 16 17 16 15 14 13 12 13 14 15 16 15 14 13 17 16 15 14 18 17 16 15 19 18 17 16

[illegible]

Example 9 (Development 3)

More variations on the original pattern.

[illegible]

The first staff of music is written on a five-line staff with a treble clef. It contains a sequence of notes with various accidentals and dynamics. The notes are: G4 (accented), A4, Bb4, C5, D5, Eb5, F5, G5, Ab5, Bb5, C6, D6, Eb6, F6, G6, Ab6, Bb6, C7, D7, Eb7, F7, G7, Ab7, Bb7, C8, D8, Eb8, F8, G8, Ab8, Bb8, C9, D9, Eb9, F9, G9, Ab9, Bb9, C10, D10, Eb10, F10, G10, Ab10, Bb10, C11, D11, Eb11, F11, G11, Ab11, Bb11, C12, D12, Eb12, F12, G12, Ab12, Bb12, C13, D13, Eb13, F13, G13, Ab13, Bb13, C14, D14, Eb14, F14, G14, Ab14, Bb14, C15, D15, Eb15, F15, G15, Ab15, Bb15, C16, D16, Eb16, F16, G16, Ab16, Bb16, C17, D17, Eb17, F17, G17, Ab17, Bb17, C18, D18, Eb18, F18, G18, Ab18, Bb18, C19, D19, Eb19, F19, G19, Ab19, Bb19, C20, D20, Eb20, F20, G20, Ab20, Bb20, C21, D21, Eb21, F21, G21, Ab21, Bb21, C22, D22, Eb22, F22, G22, Ab22, Bb22, C23, D23, Eb23, F23, G23, Ab23, Bb23, C24, D24, Eb24, F24, G24, Ab24, Bb24, C25, D25, Eb25, F25, G25, Ab25, Bb25, C26, D26, Eb26, F26, G26, Ab26, Bb26, C27, D27, Eb27, F27, G27, Ab27, Bb27, C28, D28, Eb28, F28, G28, Ab28, Bb28, C29, D29, Eb29, F29, G29, Ab29, Bb29, C30, D30, Eb30, F30, G30, Ab30, Bb30, C31, D31, Eb31, F31, G31, Ab31, Bb31, C32, D32, Eb32, F32, G32, Ab32, Bb32, C33, D33, Eb33, F33, G33, Ab33, Bb33, C34, D34, Eb34, F34, G34, Ab34, Bb34, C35, D35, Eb35, F35, G35, Ab35, Bb35, C36, D36, Eb36, F36, G36, Ab36, Bb36, C37, D37, Eb37, F37, G37, Ab37, Bb37, C38, D38, Eb38, F38, G38, Ab38, Bb38, C39, D39, Eb39, F39, G39, Ab39, Bb39, C40, D40, Eb40, F40, G40, Ab40, Bb40, C41, D41, Eb41, F41, G41, Ab41, Bb41, C42, D42, Eb42, F42, G42, Ab42, Bb42, C43, D43, Eb43, F43, G43, Ab43, Bb43, C44, D44, Eb44, F44, G44, Ab44, Bb44, C45, D45, Eb45, F45, G45, Ab45, Bb45, C46, D46, Eb46, F46, G46, Ab46, Bb46, C47, D47, Eb47, F47, G47, Ab47, Bb47, C48, D48, Eb48, F48, G48, Ab48, Bb48, C49, D49, Eb49, F49, G49, Ab49, Bb49, C50, D50, Eb50, F50, G50, Ab50, Bb50, C51, D51, Eb51, F51, G51, Ab51, Bb51, C52, D52, Eb52, F52, G52, Ab52, Bb52, C53, D53, Eb53, F53, G53, Ab53, Bb53, C54, D54, Eb54, F54, G54, Ab54, Bb54, C55, D55, Eb55, F55, G55, Ab55, Bb55, C56, D56, Eb56, F56, G56, Ab56, Bb56, C57, D57, Eb57, F57, G57, Ab57, Bb57, C58, D58, Eb58, F58, G58, Ab58, Bb58, C59, D59, Eb59, F59, G59, Ab59, Bb59, C60, D60, Eb60, F60, G60, Ab60, Bb60, C61, D61, Eb61, F61, G61, Ab61, Bb61, C62, D62, Eb62, F62, G62, Ab62, Bb62, C63, D63, Eb63, F63, G63, Ab63, Bb63, C64, D64, Eb64, F64, G64, Ab64, Bb64, C65, D65, Eb65, F65, G65, Ab65, Bb65, C66, D66, Eb66, F66, G66, Ab66, Bb66, C67, D67, Eb67, F67, G67, Ab67, Bb67, C68, D68, Eb68, F68, G68, Ab68, Bb68, C69, D69, Eb69, F69, G69, Ab69, Bb69, C70, D70, Eb70, F70, G70, Ab70, Bb70, C71, D71, Eb71, F71, G71, Ab71, Bb71, C72, D72, Eb72, F72, G72, Ab72, Bb72, C73, D73, Eb73, F73, G73, Ab73, Bb73, C74, D74, Eb74, F74, G74, Ab74, Bb74, C75, D75, Eb75, F75, G75, Ab75, Bb75, C76, D76, Eb76, F76, G76, Ab76, Bb76, C77, D77, Eb77, F77, G77, Ab77, Bb77, C78, D78, Eb78, F78, G78, Ab78, Bb78, C79, D79, Eb79, F79, G79, Ab79, Bb79, C80, D80, Eb80, F80, G80, Ab80, Bb80, C81, D81, Eb81, F81, G81, Ab81, Bb81, C82, D82, Eb82, F82, G82, Ab82, Bb82, C83, D83, Eb83, F83, G83, Ab83, Bb83, C84, D84, Eb84, F84, G84, Ab84, Bb84, C85, D85, Eb85, F85, G85, Ab85, Bb85, C86, D86, Eb86, F86, G86, Ab86, Bb86, C87, D87, Eb87, F87, G87, Ab87, Bb87, C88, D88, Eb88, F88, G88, Ab88, Bb88, C89, D89, Eb89, F89, G89, Ab89, Bb89, C90, D90, Eb90, F90, G90, Ab90, Bb90, C91, D91, Eb91, F91, G91, Ab91, Bb91, C92, D92, Eb92, F92, G92, Ab92, Bb92, C93, D93, Eb93, F93, G93, Ab93, Bb93, C94, D94, Eb94, F94, G94, Ab94, Bb94, C95, D95, Eb95, F95, G95, Ab95, Bb95, C96, D96, Eb96, F96, G96, Ab96, Bb96, C97, D97, Eb97, F97, G97, Ab97, Bb97, C98, D98, Eb98, F98, G98, Ab98, Bb98, C99, D99, Eb99, F99, G99, Ab99, Bb99, C100, D100, Eb100, F100, G100, Ab100, Bb100, C101, D101, Eb101, F101, G101, Ab101, Bb101, C102, D102, Eb102, F102, G102, Ab102, Bb102, C103, D103, Eb103, F103, G103, Ab103, Bb103, C104, D104, Eb104, F104, G104, Ab104, Bb104, C105, D105, Eb105, F105, G105, Ab105, Bb105, C106, D106, Eb106, F106, G106, Ab106, Bb106, C107, D107, Eb107, F107, G107, Ab107, Bb107, C108, D108, Eb108, F108, G108, Ab108, Bb108, C109, D109, Eb109, F109, G109, Ab109, Bb109, C110, D110, Eb110, F110, G110, Ab110, Bb110, C111, D111, Eb111, F111, G111, Ab111, Bb111, C112, D112, Eb112, F112, G112, Ab112, Bb112, C113, D113, Eb113, F113, G113, Ab113, Bb113, C114, D114, Eb114, F114, G114, Ab114, Bb114, C115, D115, Eb115, F115, G115, Ab115, Bb115, C116, D116, Eb116, F116, G116, Ab116, Bb116, C117, D117, Eb117, F117, G117, Ab117, Bb117, C118, D118, Eb118, F118, G118, Ab118, Bb118, C119, D119, Eb119, F119, G119, Ab119, Bb119, C120, D120, Eb120, F120, G120, Ab120, Bb120, C121, D121, Eb121, F121, G121, Ab121, Bb121, C122, D122, Eb122, F122, G122, Ab122, Bb122, C123, D123, Eb123, F123, G123, Ab123, Bb123, C124, D124, Eb124, F124, G124, Ab124, Bb124, C125, D125, Eb125, F125, G125, Ab125, Bb125, C126, D126, Eb126, F126, G126, Ab126, Bb126, C127, D127, Eb127, F127, G127, Ab127, Bb127, C128, D128, Eb128, F128, G128, Ab128, Bb128, C129, D129, Eb129, F129, G129, Ab129, Bb129, C130, D130, Eb130, F130, G130, Ab130, Bb130, C131, D131, Eb131, F131, G131, Ab131, Bb131, C132, D132, Eb132, F132, G132, Ab132, Bb132, C133, D133, Eb133, F133, G133, Ab133, Bb133, C134, D134, Eb134, F134, G134, Ab134, Bb134, C135, D135, Eb135, F135, G135, Ab135, Bb1

[illegible]

Musical staff with notes and TAB: 18 17 16 15 14 15 16 17 18 17 16 15 16 17 18 19

Musical staff with notes and TAB: 20 19 18 17 18 19 20 21 20 19 18 17 19 18 17 16

Musical staff with notes and TAB: 19 18 17 16 19 18 17 16 19 18 17 16 15 16 17 18 15 16 17 18 14 15 16 17 14 15 16 17 14 15 16 17

Musical staff with notes and TAB: 14 15 16 17 14 17 17 (17) (17)

8va

(Both notes vib.)

Example 9 (Development 4)

After deciding on a target tempo, it may be advantageous to start with a slightly faster tempo marking. For example, if you set 208 beats per minute in your sights, make an attempt to overshoot this new goal tempo by turning the metronome to a higher setting of about 216. This forces both hands to work harder than ever before. Then back off the metronome again to 208 and see if things fall into place.

Development 4 is the same four measures as before preceded by six measures of single-note subdivisions and followed by a lick based on the A minor pentatonic. The tempo of the recording is $\text{♩} = 208$. Notice the A minor pentatonic (A C D E G) bonus lick at the end.

The first staff of music is written in 4/4 time on a treble clef. It begins with a key signature of one sharp (F#). The melody consists of eighth notes: F#4, G4, A4, B4, C5, B4, A4, G4 in the first measure, and F#4, G4, A4, B4, C5, B4, A4, G4 in the second measure.

The musical notation for 'The Wind' is presented on a grand staff. The upper staff uses a treble clef and a key signature of one sharp (F#). The melody is written in a single line, featuring a series of eighth and sixteenth notes. The lower staff is a six-line guitar tablature, with the letters 'T', 'A', and 'B' positioned at the beginning of the first, second, and third lines respectively. The fret numbers are written below the lines, indicating the fretting for each note in the melody.

The first staff of music is written in treble clef with a key signature of one sharp (F#). The melody begins with a quarter rest, followed by a quarter note F#4, an eighth note G#4, a quarter note A4, and a quarter note B4. This is followed by a half note A4, a quarter note G#4, a quarter note F#4, and a quarter note E4. The melody then continues with a quarter note D4, a quarter note C4, a quarter note B3, and a quarter note A3. The staff ends with a double bar line.

The musical notation for the guitar solo is presented on a standard five-line staff. It begins with a treble clef and a key signature of one sharp (F#). The solo consists of a series of eighth notes, each with a stem pointing upwards. The notes are: F#4, E4, D4, C#4, B3, A3, G3, F#3, E3, D3, C#3, B2, A2, G2, F#2, E2, D2, C#2, B1, A1, G1, F#1, E1, D1, C#1, B0, A0, G0, F#0, E0, D0, C#0, B-1, A-1, G-1, F#-1, E-1, D-1, C#-1, B-2, A-2, G-2, F#-2, E-2, D-2, C#-2, B-3, A-3, G-3, F#-3, E-3, D-3, C#-3, B-4, A-4, G-4, F#-4, E-4, D-4, C#-4, B-5, A-5, G-5, F#-5, E-5, D-5, C#-5, B-6, A-6, G-6, F#-6, E-6, D-6, C#-6, B-7, A-7, G-7, F#-7, E-7, D-7, C#-7, B-8, A-8, G-8, F#-8, E-8, D-8, C#-8, B-9, A-9, G-9, F#-9, E-9, D-9, C#-9, B-10, A-10, G-10, F#-10, E-10, D-10, C#-10, B-11, A-11, G-11, F#-11, E-11, D-11, C#-11, B-12, A-12, G-12, F#-12, E-12, D-12, C#-12, B-13, A-13, G-13, F#-13, E-13, D-13, C#-13, B-14, A-14, G-14, F#-14, E-14, D-14, C#-14, B-15, A-15, G-15, F#-15, E-15, D-15, C#-15, B-16, A-16, G-16, F#-16, E-16, D-16, C#-16, B-17, A-17, G-17, F#-17, E-17, D-17, C#-17, B-18, A-18, G-18, F#-18, E-18, D-18, C#-18, B-19, A-19, G-19, F#-19, E-19, D-19, C#-19, B-20, A-20, G-20, F#-20, E-20, D-20, C#-20, B-21, A-21, G-21, F#-21, E-21, D-21, C#-21, B-22, A-22, G-22, F#-22, E-22, D-22, C#-22, B-23, A-23, G-23, F#-23, E-23, D-23, C#-23, B-24, A-24, G-24, F#-24, E-24, D-24, C#-24, B-25, A-25, G-25, F#-25, E-25, D-25, C#-25, B-26, A-26, G-26, F#-26, E-26, D-26, C#-26, B-27, A-27, G-27, F#-27, E-27, D-27, C#-27, B-28, A-28, G-28, F#-28, E-28, D-28, C#-28, B-29, A-29, G-29, F#-29, E-29, D-29, C#-29, B-30, A-30, G-30, F#-30, E-30, D-30, C#-30, B-31, A-31, G-31, F#-31, E-31, D-31, C#-31, B-32, A-32, G-32, F#-32, E-32, D-32, C#-32, B-33, A-33, G-33, F#-33, E-33, D-33, C#-33, B-34, A-34, G-34, F#-34, E-34, D-34, C#-34, B-35, A-35, G-35, F#-35, E-35, D-35, C#-35, B-36, A-36, G-36, F#-36, E-36, D-36, C#-36, B-37, A-37, G-37, F#-37, E-37, D-37, C#-37, B-38, A-38, G-38, F#-38, E-38, D-38, C#-38, B-39, A-39, G-39, F#-39, E-39, D-39, C#-39, B-40, A-40, G-40, F#-40, E-40, D-40, C#-40, B-41, A-41, G-41, F#-41, E-41, D-41, C#-41, B-42, A-42, G-42, F#-42, E-42, D-42, C#-42, B-43, A-43, G-43, F#-43, E-43, D-43, C#-43, B-44, A-44, G-44, F#-44, E-44, D-44, C#-44, B-45, A-45, G-45, F#-45, E-45, D-45, C#-45, B-46, A-46, G-46, F#-46, E-46, D-46, C#-46, B-47, A-47, G-47, F#-47, E-47, D-47, C#-47, B-48, A-48, G-48, F#-48, E-48, D-48, C#-48, B-49, A-49, G-49, F#-49, E-49, D-49, C#-49, B-50, A-50, G-50, F#-50, E-50, D-50, C#-50, B-51, A-51, G-51, F#-51, E-51, D-51, C#-51, B-52, A-52, G-52, F#-52, E-52, D-52, C#-52, B-53, A-53, G-53, F#-53, E-53, D-53, C#-53, B-54, A-54, G-54, F#-54, E-54, D-54, C#-54, B-55, A-55, G-55, F#-55, E-55, D-55, C#-55, B-56, A-56, G-56, F#-56, E-56, D-56, C#-56, B-57, A-57, G-57, F#-57, E-57, D-57, C#-57, B-58, A-58, G-58, F#-58, E-58, D-58, C#-58, B-59, A-59, G-59, F#-59, E-59, D-59, C#-59, B-60, A-60, G-60, F#-60, E-60, D-60, C#-60, B-61, A-61, G-61, F#-61, E-61, D-61, C#-61, B-62, A-62, G-62, F#-62, E-62, D-62, C#-62, B-63, A-63, G-63, F#-63, E-63, D-63, C#-63, B-64, A-64, G-64, F#-64, E-64, D-64, C#-64, B-65, A-65, G-65, F#-65, E-65, D-65, C#-65, B-66, A-66, G-66, F#-66, E-66, D-66, C#-66, B-67, A-67, G-67, F#-67, E-67, D-67, C#-67, B-68, A-68, G-68, F#-68, E-68, D-68, C#-68, B-69, A-69, G-69, F#-69, E-69, D-69, C#-69, B-70, A-70, G-70, F#-70, E-70, D-70, C#-70, B-71, A-71, G-71, F#-71, E-71, D-71, C#-71, B-72, A-72, G-72, F#-72, E-72, D-72, C#-72, B-73, A-73, G-73, F#-73, E-73, D-73, C#-73, B-74, A-74, G-74, F#-74, E-74, D-74, C#-74, B-75, A-75, G-75, F#-75, E-75, D-75, C#-75, B-76, A-76, G-76, F#-76, E-76, D-76, C#-76, B-77, A-77, G-77, F#-77, E-77, D-77, C#-77, B-78, A-78, G-78, F#-78, E-78, D-78, C#-78, B-79, A-79, G-79, F#-79, E-79, D-79, C#-79, B-80, A-80, G-80, F#-80, E-80, D-80, C#-80, B-81, A-81, G-81, F#-81, E-81, D-81, C#-81, B-82, A-82, G-82, F#-82, E-82, D-82, C#-82, B-83, A-83, G-83, F#-83, E-83, D-83, C#-83, B-84, A-84, G-84, F#-84, E-84, D-84, C#-84, B-85, A-85, G-85, F#-85, E-85, D-85, C#-85, B-86, A-86, G-86, F#-86, E-86, D-86, C#-86, B-87, A-87, G-87, F#-87, E-87, D-87, C#-87, B-88, A-88, G-88, F#-88, E-88, D-88, C#-88, B-89, A-89, G-89, F#-89, E-89, D-89, C#-89, B-90, A-90, G-90, F#-90, E-90, D-90, C#-90, B-91, A-91, G-91, F#-91, E-91, D-91, C#-91, B-92, A-92, G-92, F#-92, E-92, D-92, C#-92, B-93, A-93, G-93, F#-93, E-93, D-93, C#-93, B-94, A-94, G-94, F#-94, E-94, D-94, C#-94, B-95, A-95, G-95, F#-95, E-95, D-95, C#-95, B-96, A-96, G-96, F#-96, E-96, D-96, C#-96, B-97, A-97, G-97, F#-97, E-97, D-97, C#-97, B-98, A-98, G-98, F#-98, E-98, D-98, C#-98, B-99, A-99, G-99, F#-99, E-99, D-99, C#-99, B-100, A-100, G-100, F#-100, E-100, D-100, C#-100, B-101, A-101, G-101, F#-101, E-101, D-101, C#-101, B-102, A-102, G-102, F#-102, E-102, D-102, C#-102, B-103, A-103, G-103, F#-103, E-103, D-103, C#-103, B-104, A-104, G-104, F#-104, E-104, D-104, C#-104, B-105, A-105, G-105, F#-105, E-105, D-105, C#-105, B-106, A-106, G-106, F#-106, E-106, D-106, C#-106, B-107,

12.

steady gliss.

TAB

Example 10

Use this next exercise to demonstrate how speed and accuracy can be developed by using a metronome to monitor progress. This time 16th-note triplets (six notes per beat) derived from the E minor scale (E F# G A B C D) are arranged in a three-note-per-string pattern.

Sheet music for guitar, featuring a key signature of one sharp (F#) and a 4/4 time signature. The music is written on a standard staff and a corresponding TAB staff. The TAB staff includes fret numbers (12, 14, 15, 16, 17, 19, 20, 22) and a key signature change to G major (one sharp). The musical staff includes a key signature change to G major (one sharp) and a 4/4 time signature. The music is written on a standard staff and a corresponding TAB staff. The TAB staff includes fret numbers (12, 14, 15, 16, 17, 19, 20, 22) and a key signature change to G major (one sharp). The musical staff includes a key signature change to G major (one sharp) and a 4/4 time signature.

Part V Technique

(Scale Fragments and Sequences)

Another good way to develop speed is to work on small, isolated scale fragments or segments which can be practiced and perfected before they are combined into longer, technically challenging runs. In a sense, this approach is like taking small bites at a time out of a complex lick instead of attempting to start right off swallowing it whole. The fragments that follow, offer a handful of melodic patterns that can be practiced over and over with the eventual goal of incorporating them into longer, flowing licks to be used in improvising.

Example 11

Fragment 1

Fragment 1 musical notation and guitar TAB. The notation shows a 4/4 measure with four groups of eighth notes, each beamed in a triplet. The notes are G4, A4, B4, C5, D5, E5, F5, G5. The guitar TAB below the staff shows the sequence 4 5 7 4 5 7 4 5 7 4 5 7.

Fragment 2

Fragment 2 musical notation and guitar TAB. The notation shows a 4/4 measure with four groups of eighth notes, each beamed in a triplet. The notes are A4, B4, C5, D5, E5, F5, G5, A5. The guitar TAB below the staff shows the sequence 4 5 7 4 5 7 4 5 7 4 5 7.


Fragment 3

Fragment 3 musical notation and guitar TAB. The notation shows a 4/4 measure with four groups of eighth notes, each beamed in a triplet. The notes are G4, A4, B4, C5, D5, E5, F5, G5. The guitar TAB below the staff shows the sequence 2 4 5 2 4 5 2 4 5 2 4 5.

Fragment 4

Fragment 4 musical notation and guitar TAB. The notation shows a 4/4 measure with four groups of eighth notes, each beamed in a triplet. The notes are A4, B4, C5, D5, E5, F5, G5, A5. The guitar TAB below the staff shows the sequence 2 4 5 2 4 5 2 4 5 2 4 5.

Fragment 5



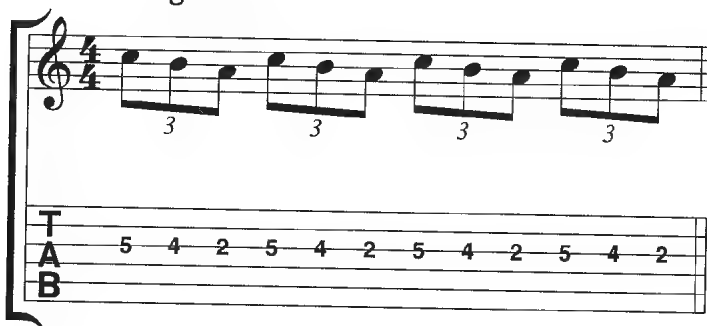
Fragment 5 is a musical exercise in 4/4 time. The notation consists of a treble clef staff with a key signature of one sharp (F#) and a common time signature of 4/4. The melody is composed of eighth notes, with triplets indicated by a '3' over the notes. The fretboard diagram below the staff shows the sequence of frets: 7, 5, 4, 7, 5, 4, 7, 5, 4, 7, 5, 4.

Fragment 6



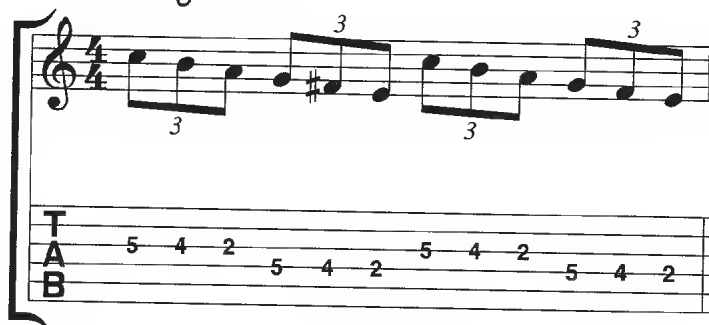
Fragment 6 is a musical exercise in 4/4 time. The notation consists of a treble clef staff with a key signature of one sharp (F#) and a common time signature of 4/4. The melody is composed of eighth notes, with triplets indicated by a '3' over the notes. The fretboard diagram below the staff shows the sequence of frets: 7, 5, 4, 7, 5, 4, 7, 5, 4, 7, 5, 4.

Fragment 7



Fragment 7 is a musical exercise in 4/4 time. The notation consists of a treble clef staff with a key signature of one sharp (F#) and a common time signature of 4/4. The melody is composed of eighth notes, with triplets indicated by a '3' over the notes. The fretboard diagram below the staff shows the sequence of frets: 5, 4, 2, 5, 4, 2, 5, 4, 2, 5, 4, 2.

Fragment 8




Fragment 8 is a musical exercise in 4/4 time. The notation consists of a treble clef staff with a key signature of one sharp (F#) and a common time signature of 4/4. The melody is composed of eighth notes, with triplets indicated by a '3' over the notes. The fretboard diagram below the staff shows the sequence of frets: 5, 4, 2, 5, 4, 2, 5, 4, 2, 5, 4, 2.

Fragment 9



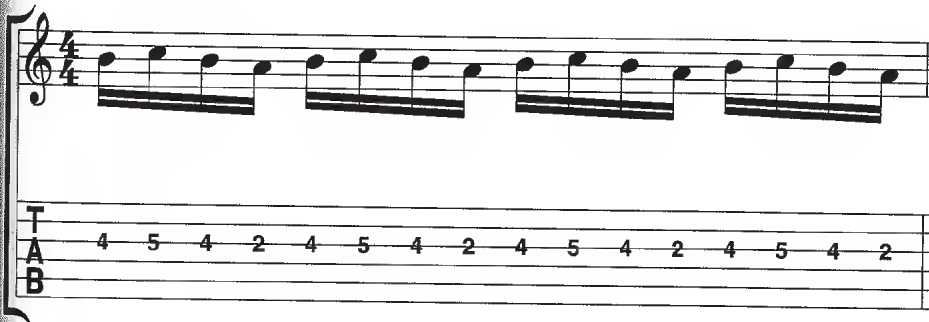
Fragment 9 is a musical exercise in 4/4 time. The notation consists of a treble clef staff with a key signature of one sharp (F#) and a common time signature of 4/4. The melody is composed of eighth notes, with triplets indicated by a '3' over the notes. The fretboard diagram below the staff shows the sequence of frets: 2, 4, 5, 2, 4, 5, 7, 5, 4, 7, 5, 4, 2, 4, 5, 2, 4, 5, 7, 5, 4, 7, 5, 4.

Fragment 10



Fragment 10 is a musical exercise in 4/4 time. The notation consists of a treble clef staff with a key signature of one sharp (F#) and a common time signature of 4/4. The melody is composed of eighth notes. The fretboard diagram below the staff shows the sequence of frets: 5, 7, 5, 4, 5, 7, 5, 4, 5, 7, 5, 4, 5, 7, 5, 4.

Fragment 11



Musical notation for Fragment 11, 4/4 time. The staff shows a sequence of eighth notes: G4, A4, B4, C5, D5, E5, F5, G5, A5, B5, C6, D6, E6, F6, G6, A6, B6, C7. The tablature below shows the fret numbers: 4 5 4 2 4 5 4 2 4 5 4 2 4 5 4 2.

Fragment 12



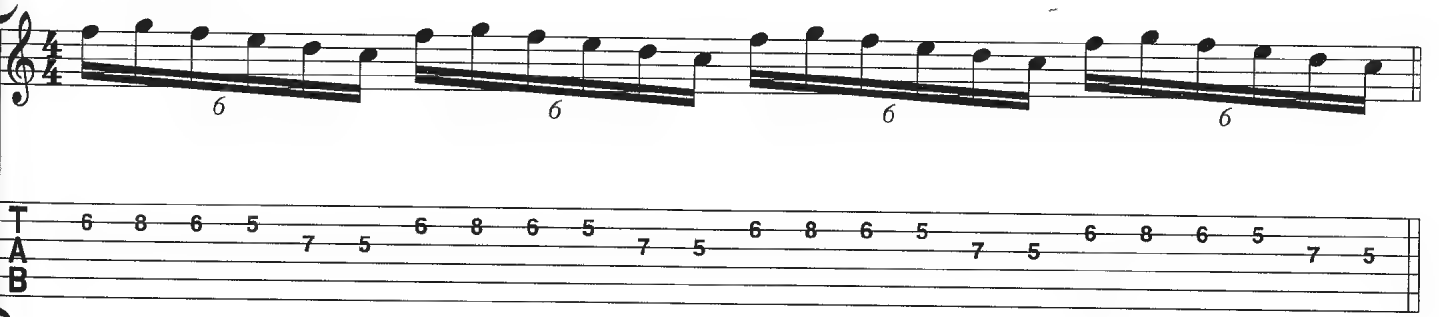
Musical notation for Fragment 12, 4/4 time. The staff shows a sequence of eighth notes: G4, A4, B4, C5, D5, E5, F5, G5, A5, B5, C6, D6, E6, F6, G6, A6, B6, C7. The tablature below shows the fret numbers: 5 7 5 4 7 4 5 7 5 4 7 4 5 7 5 4 7 4 5 7 5 4 7 4.

Fragment 13



Musical notation for Fragment 13, 4/4 time. The staff shows a sequence of eighth notes: G4, A4, B4, C5, D5, E5, F5, G5, A5, B5, C6, D6, E6, F6, G6, A6, B6, C7. The tablature below shows the fret numbers: 4 5 4 2 5 2 4 5 4 2 5 2 4 5 4 2 5 2 4 5 4 2 5 2.

Fragment 14



Musical notation for Fragment 14, 4/4 time. The staff shows a sequence of eighth notes: G4, A4, B4, C5, D5, E5, F5, G5, A5, B5, C6, D6, E6, F6, G6, A6, B6, C7. The tablature below shows the fret numbers: 6 8 6 5 7 5 6 8 6 5 7 5 6 8 6 5 7 5 6 8 6 5 7 5.

Fragment 15

Fragment 15 is a musical exercise in 4/4 time. The notation features a treble clef staff with a key signature of one sharp (F#). The melody consists of eighth notes, with some measures containing beamed eighth notes. The guitar tablature below the staff shows the fret numbers for each note: 5, 7, 5, 4, 7, 5, 4, 5, 7, 4, 5, 7, 5, 4, 7, 5, 4, 5, 7, 4.

Fragment 16

Fragment 16 is a musical exercise in 6/4 time. The notation features a treble clef staff with a key signature of one sharp (F#). The melody consists of eighth notes, with some measures containing beamed eighth notes. The guitar tablature below the staff shows the fret numbers for each note: 4, 5, 4, 2, 5, 4, 2, 4, 5, 2, 4, 5, 4, 2, 5, 4, 2, 4, 5, 2, 4, 5, 4, 2, 5, 4, 2, 4, 5, 2.

Fragment 17

Fragment 17 is a musical exercise in 4/4 time. The notation features a treble clef staff with a key signature of one sharp (F#). The melody consists of eighth notes, with some measures containing beamed eighth notes. The guitar tablature below the staff shows the fret numbers for each note: 5, 7, 5, 4, 4, 5, 7, 5, 4, 4.

Fragment 18

Fragment 18 is a musical exercise in 4/4 time. The notation features a treble clef staff with a key signature of one sharp (F#). The melody consists of eighth notes, with some measures containing beamed eighth notes. The guitar tablature below the staff shows the fret numbers for each note: 4, 5, 4, 2, 2, 4, 5, 4, 2, 2.

Example 11 (Development 1)

Each of the previous scale fragments were in the key of G major (G A B C D E F#). These patterns can be played anywhere on the neck, between any two strings. They can also be moved up or down a string in a chromatic (up/down in half-steps) or diatonic (within the parameters of a chosen scale) fashion.

(chromatic)

T	5	7	5	4	5	7	5	4	5	7	5	4	5	7	5	4
A																
B																

T	7	9	7	6	7	9	7	6	7	9	7	6	7	9	7	6
A																
B																

(diatonic)

T	4	5	4	2	4	5	4	2	4	5	4	2	4	5	4	2
A																
B																

T	7	9	7	5	7	9	7	5	7	9	7	5	7	9	7	5
A																
B																

T	8	0	8	0
A	8	0	8	0
B	7	0	7	0

Example 11 (Development 2)

Scale fragments can be practiced with a metronome as discussed earlier, or by playing the exercises over and over in free time beginning with a slow tempo, gradually increasing the speed, then backing off to a slower tempo again. In a way, this acceleration and deceleration is similar to the revving of an automobile or motorcycle engine. Try varying the degree of dynamics in conjunction with these changes in speed. In other words, play louder as the tempo increases, and quieter as things slow down. On the recording for the following example, the tempo fluctuates from approximately 58 beats per minute, to around 200.

Freely play 7 times

4/4

3/8

2/4

T
A
B

4 5 4 2 4 5 4 2 4 5 4 2 4 5 4 2

4 5 4 2 4 5 4 2 4 5 4 2

[illegible]

Example 11 (Development 4)

Another fun thing to do with all of these exercises, since they're arranged in similar 16th-note or 16th-note triplet patterns, is to try spontaneously combining a few of them. Try to be as imaginative as possible. The following example is performed in free time.

Freely

The musical score consists of four systems, each with a treble clef staff and a three-line TAB staff. The key signature is one sharp (F#). The first system is in 6/4 time and features six groups of sixteenth-note triplets, each marked with an accent (>). The TAB for this system is: 4 5 4 2 4 5 4 2 4 5 4 2 4 5 4 2 4 5 4 2. The second system is in 3/4 time and features three groups of sixteenth-note triplets, each marked with an accent (>). The TAB for this system is: 4 5 4 2 5 2 4 5 4 2 5 2 4 5 4 2 5 2. The third system is in 4/4 time and features four groups of sixteenth-note triplets, each marked with an accent (>). The TAB for this system is: 4 5 4 2 5 2 4 5 4 2 5 2 4 5 4 2 5 2 4 5 4 2 5 2 4 5 4 2 5 2 4 5 4 2. The fourth system is in 4/4 time and features four groups of sixteenth-note triplets, each marked with an accent (>). The TAB for this system is: 4 5 4 2 5 2 4 5 4 2 5 2 4 5 4 2 5 2 4 5 4 2 5 2 4 5 4 2 5 2 4 5 4 2.

First system of musical notation. The top staff is a treble clef with a key signature of one sharp (F#) and a 3/4 time signature. It contains six measures of eighth-note runs, each marked with a '5' above the staff. The bottom staff is a tablature staff with two lines, labeled 'T' and 'B'. It contains two measures of fret numbers corresponding to the notes in the top staff.

Tablature: 4 5 4 2 | 5 4 2 4 5 2 4 5 4 2 | 5 4 2 4 5 2 | 4 5 4 2 | 5 4 2 4 5 2 4 5 4 2 | 5 4

Second system of musical notation. The top staff is a treble clef with a key signature of one sharp (F#) and a 4/4 time signature. It contains six measures of eighth-note runs, each marked with a '6' above the staff. The bottom staff is a tablature staff with two lines, labeled 'T' and 'B'. It contains two measures of fret numbers corresponding to the notes in the top staff.

Tablature: 2 4 5 2 4 5 | 2 4 5 2 4 5 2 4 5 2 4 5 | 4 5 7 4 5 7 | 4 5 7 4 5 7 4 5 7 4 5 7 | 4 5 7 4 5 7

Third system of musical notation. The top staff is a treble clef with a key signature of one sharp (F#) and a 4/4 time signature. It contains four measures of eighth-note runs, each marked with a '6' below the staff. The bottom staff is a tablature staff with two lines, labeled 'T' and 'B'. It contains one measure of fret numbers corresponding to the notes in the top staff.

Tablature: 4 5 7 4 5 7 4 5 7 4 5 7 4 5 7 4 5 7 4 5 7

Fourth system of musical notation. The top staff is a treble clef with a key signature of one sharp (F#) and a 3/4 time signature. It contains two measures of eighth-note runs, each marked with a '6' below the staff. The bottom staff is a tablature staff with two lines, labeled 'T' and 'B'. It contains two measures of fret numbers corresponding to the notes in the top staff.

Tablature: 4 5 7 4 5 7 5 4 | 7 5 4 5 7 4 | 5 7 5 4 5 7 5 4

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First system of musical notation. The top staff is a treble clef with a key signature of one sharp (F#) and a 3/4 time signature. It contains a sequence of eighth notes with accents (>) over them. The bottom staff is a guitar tablature (TAB) with a treble clef, showing the fret numbers corresponding to the notes in the top staff: 5 7 5 4 5 7 5 4 5 7 5 4 5 7 5 4 5 7 5 4 5 7 5 4.

Second system of musical notation. The top staff is a treble clef with a key signature of one sharp (F#) and a 4/4 time signature. It contains a sequence of eighth notes with accents (>) over them. The bottom staff is a guitar tablature (TAB) with a treble clef, showing the fret numbers corresponding to the notes in the top staff: 7 9 7 5 7 9 7 5 7 9 7 5 7 9 7 4 5 7 5 4 5 7 5 4 5 7 5 4 5 7 5 4.

Third system of musical notation. The top staff is a treble clef with a key signature of one sharp (F#) and a 3/4 time signature. It contains a sequence of eighth notes with accents (>) over them. The bottom staff is a guitar tablature (TAB) with a treble clef, showing the fret numbers corresponding to the notes in the top staff: 5 7 5 4 7 4 5 7 5 4 7 4 5 7 5 4 7 4. The system concludes with a 2/4 time signature change and a sequence of eighth notes with accents (>) over them, followed by a 3/4 time signature change and a sequence of eighth notes with accents (>) over them.

Fourth system of musical notation. The top staff is a treble clef with a key signature of one sharp (F#) and a 3/4 time signature. It contains a sequence of eighth notes with accents (>) over them. The bottom staff is a guitar tablature (TAB) with a treble clef, showing the fret numbers corresponding to the notes in the top staff: 5 7 5 4 7 5 4 7 5 3 7 5 3. The system concludes with a sequence of eighth notes with accents (>) over them, followed by a sequence of eighth notes with accents (>) over them, and a final note with a wavy line above it.

Example 12

As mentioned before, each one of these fragments can be used in the context of an extended run. The example that follows takes the patterns used in Fragments 4 and 6 from Example 11, transposes them to the key of A major (A B C# D E F# G#), and incorporates them into a longer sequence of notes, playing them on different pairs of strings.

5 7 9 5 7 9 5 7 9 5 7 9 5 7 9 5 7 9

5 7 9 5 7 9 5 7 9 6 7 9 6 7 9 6 7 9 6 7 9 7 9 10

7 9 10 7 9 10 10 9 7 10 9 7 9 7 6 9 7 6 9 7 6

9 7 6 9 7 5 9 7 5 9 7 5 5 7

Example 13

This next sequence of notes is derived from combinations of both Fragments 10 and 11, as well as Fragments 15 and 16. The difference here is that the subdivision used to perform this passage is consistently 16th notes (four notes per beat) and the fragments are once again transposed to the key of A.

(ascending)

T
A
B

5 7 9 5 7 9 7 5 9 7 5 7 9 5 7 9 5 7 9 6 7 9 7 6 9 7 5 7 9 6 7 9

T
A
B

6 7 9 6 7 9 7 6 9 7 6 7 9 6 7 9 6 7 9 7 9 10 9 7 9 7 6 7 9 7 9 10

(descending)

T
A
B

7 9 10 7 9 10 9 7 10 9 7 9 10 7 9 10 9 10 9 7 9 10 9 7 9 10 9 7 9 10 9 7

T
A
B

9 10 9 7 9 10 9 7 9 10 9 7 9 10 9 7 9 10 9 7 10 9 7 9 10 7 10 7

T
A
B

9 10 9 7 9 7 6 7 9 7 9 10 9 7 9 6 7 9 7 6 9 7 6 7 9 6 7 9 7 6 9 6

7 9 7 6 9 7 5 7 9 6 7 9 7 6 9 5 7 9 7 5 9 7 5 7 9 5 7 9 7 5 9 5

Example 14

Here's another example using versions of Fragments 17 and 18 in a 16th-note string-skipping passage transposed to the key of A major.

6 7 9 7 6 6 7 9 7 6 5 7 9 9 7 5 7 9 7 6 6 7 9 7 6 9 7 5 7 9 9 7 5 7

6 7 9 7 6 6 7 9 7 6 9 7 5 7 9 6 7 9 7 6 9 7 6 7 9 5 9 7 5 7 9

7 9 7 5 5 7 9 7 5 5 7 9 7 5 5 7 9 7 9 7 6 7 9 9 7 6 7 9 6 7 9 9 7 6 7 9

7 5 9 7 6 7 9 5 7 9 7 5 9 6 7 9 7 6 9 7 5 7 9 6 7 9 7 6 7 9 7 7 9 7 5

A major scale (5th position)

A major scale (5th position)

5 7 9 5 7 9 6 7 9 6 7 9 5 7 9 5 7 9

Example 15

Here's another sequence based on one of the fragments used earlier.

Example 16

The next example demonstrates how all the previously learned scalar techniques can be applied to improvising using primarily D dorian (D E F G A B C) and D aeolian minor (D E F G A B \flat C) scales. These types of runs are most effective when used as fills leading into or out of primary melodic ideas as a means of building dramatic tension. Listen to the recording first, then go back and try to implement some of these same types of ideas into your own playing.

A7 \flat 5 **Dm7**

(Drum fill)

T
A
B

B \flat maj9

T
A
B

T
A
B

T
A
B

The musical notation consists of four systems, each with a standard staff and a guitar tablature staff. The first system is for A7 \flat 5 and Dm7 chords, featuring a drum fill and a melodic line with triplets. The second system continues the melodic line with half-note bends. The third system is for B \flat maj9, featuring a melodic line with half-note bends. The fourth system continues the melodic line with various fret numbers and bends.

50 Part V: Technique

Gm11

13 10 13 10 13 10 12 10 12 12 10 12 10 10 8 10 10 8 10 8 12

A7sus

T
A
B
B

9 10 11 12 8 10 11 12 9 10 11 12 8 10 11 12 9 10 11 12 8 10 11 12 8 10 11 12 8 10 11 12

[illegible]

B♭maj9
(8va)-----

loco

TAB

TAB

Gm11

TAB

TAB

52 Part V: Technique

A7sus

wide vib.

3

6

6

TAB

(10) (10) 18 17 15 17 15 14 15 17 15 14 17 13 14 15 17

(0)

A7

1/2

1

1

TAB

15 14 14 15 16 17 17 17 17 15 17 18 15 18

Dm7

8va

3

3

3

3

3

3

1

TAB

17 15 18 18 15 18 20 17 18 20 (20) (20) 20 (20) 18 16 17 18 17 15 17 15

(8va)

loco

3

3

3

3

3

3

1/2

TAB

14 17 15 17 14 17 15 14 17 16 (16) 15 13 17 15 (15) 13 13 12 13 12 10 13 10 12 12 10 9 10 12

Bbmaj9

TAB

12 0 12 13 12 10 12 13 12 10 12 13 12 10 12 13 12 10 12 13 12 10 12 13 12 10

(12)

12 13 12 10 13 12 10 12 13 10 12 13 12 10 13 10 11 13 11 10 12 10 9 10 12 10 11 13 11 10 12 9

10 12 10 9 12 10 8 10 12 9 10 12 10 9 12 9 12 10 11

12 (12) 13 12 10 9 10 7 8 10 10 12 13 13 15 14 13

12 13 12 15 13 (13) 9 10 11 10

5 6 5 6 7 6 5 7 8 7 (7)

Part VI

Right Hand Technique

(Alternate Picking Arpeggios)

One of the more difficult techniques for most guitarists is using alternate picking through arpeggios since most of the notes within common arpeggio shapes are arranged in a one-note-per-string manner. When using alternate picking, there will be a few instances that require the pick to execute an up-stroke on a lower string after a down-stroke on a higher string. This “inside the string” picking technique is the most difficult pickstroke to master.

Example 17

The following etude focuses on this awkward technique. In general, whenever presented with an area of technique that needs to be refined, creating an etude (musical exercise) can make the process much more enjoyable.

The musical notation for the guitar solo is presented in two staves. The top staff is a standard musical staff with a treble clef, a key signature of two sharps (F# and C#), and a 6/8 time signature. It contains four measures of music. The first two measures are marked with a Bm chord and feature a triplet of eighth notes. The last two measures are marked with a Gmaj(#11) chord and also feature a triplet of eighth notes. The bottom staff is a guitar tablature staff, labeled 'TAB' on the left. It contains four measures of fret numbers corresponding to the notes in the musical staff above. The fret numbers are: Measure 1: 4, 4, 7; Measure 2: 4, 6, 4; Measure 3: 4, 5, 7; Measure 4: 5, 6, 5. The final measure of the solo is a triplet of eighth notes with fret numbers 4, 5, 6.

Bm **Cmaj(#11)**

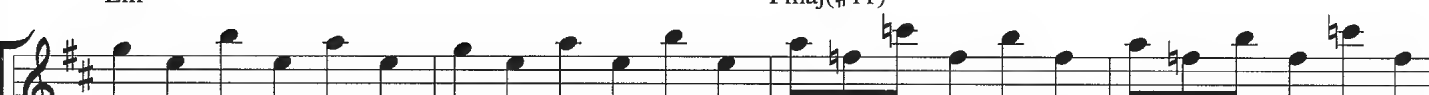
3 3 3 3 3 3 3 3

T 7 9 11 9 9 7 9 9 9 11 9 9 10 12 10 11 10 9 10 11 12 10

B

[illegible]

Em Fmaj(#11)



T
A
B

12	14	16	14	14	14
12	14	14	16	14	
14	15	17	15	16	15
14	15	16	15	17	15

While the previous exercise focused on one type of picking situation that typically arises when alternate picking through arpeggios, the exercise itself didn't actually use arpeggio shapes as the means of developing this technique. Now apply the picking pattern in Example 17 to an arpeggio passage. The difficulty becomes immediately apparent in the arpeggiation of a G major triad (G B D) in the 7th position.

Example 17 musical notation. Treble clef, 4/4 time, key of G major. The melody consists of eighth notes in a G major arpeggio shape, grouped in four sets of three, each marked with a '3' (triplets). The bass line consists of eighth notes in a G major arpeggio shape, grouped in four sets of three, each marked with a '3'. The notation includes a 'G' above the first note of the melody and a 'simile' marking below the first triplet of the bass line.

Example 18

Instead of practicing this same arpeggio over and over, the following etude adds some variety by incorporating major and minor arpeggio shapes into the chord progression: G, Bm, Am, Em7. There are also some tricky string skips.

Example 18 musical notation (first system). Treble clef, 4/4 time, key of G major. The melody consists of eighth notes in a G major arpeggio shape, grouped in four sets of three, each marked with a '3'. The bass line consists of eighth notes in a G major arpeggio shape, grouped in four sets of three, each marked with a '3'. The notation includes a 'G' above the first note of the melody and a 'simile' marking below the first triplet of the bass line.

Example 18 musical notation (second system). Treble clef, 4/4 time, key of G major. The melody consists of eighth notes in a Bm arpeggio shape, grouped in four sets of three, each marked with a '3'. The bass line consists of eighth notes in a Bm arpeggio shape, grouped in four sets of three, each marked with a '3'. The notation includes a 'Bm' above the first note of the melody and a 'simile' marking below the first triplet of the bass line.

Part VII

Left Hand Technique

(Legato Playing)

Legato means "to be performed smoothly, without any break between notes." This is typically indicated in the notation staff by a slur which appears as a curved line over or under a series of notes of different pitches. This type of technique is extremely demanding on the left hand, as it is required to articulate each note by a series of hammer-ons and pull-offs, with minimal picking activity.

Practice the following scale fragments independently, and then apply them to longer legato runs. Ideally, each of these fragments should be practiced for one minute each, without stopping, connecting each fragment into the next.

Example 19

Fragment 1 **Fragment 2**

Fragment 3 **Fragment 4**

Fragment 5

Fragment 6

The musical notation for each fragment consists of a treble clef staff with a key signature of one sharp (F#) and a corresponding guitar tablature staff below it. The tablature staff is labeled with 'T', 'A', and 'B' for the treble, auxiliary, and bass strings respectively. The notes are represented by numbers 4, 6, 7, and 9, indicating fret positions. Slurs are used to indicate legato playing. The 10:8 interval is marked with a small square symbol and the text '10:8'.

Example 20

These fragments can also be played on any string, using a wider stretch between notes if desired. They can also be played in any position and any key — diatonically or chromatically.

play 5 times

Freely

T
A
B

play 3 times

T
A
B

play 3 times

T
A
B

play 4 times

play 3 times

T
A
B

play 3 times

The image shows a musical score for a piece titled "The Rose Tree". The score is written on two staves. The top staff is a treble clef staff with a melody consisting of eighth notes. The bottom staff is a tablature staff for a six-stringed instrument, using numbers 1-6. The score is divided into two systems by a double bar line. The first system is in 2/4 time and the second system is in 4/4 time.

System 1 (2/4 time):

Melody: $\text{G4} \text{A4} \text{B4} \text{C5} \text{B4} \text{A4} \text{G4} \text{F4} \text{E4} \text{D4} \text{C4} \text{B3} \text{A3} \text{G3} \text{F3} \text{E3} \text{D3} \text{C3} \text{B2} \text{A2} \text{G2} \text{F2} \text{E2} \text{D2} \text{C2} \text{B1} \text{A1} \text{G1} \text{F1} \text{E1} \text{D1} \text{C1} \text{B0} \text{A0} \text{G0} \text{F0} \text{E0} \text{D0} \text{C0} \text{B-1} \text{A-1} \text{G-1} \text{F-1} \text{E-1} \text{D-1} \text{C-1} \text{B-2} \text{A-2} \text{G-2} \text{F-2} \text{E-2} \text{D-2} \text{C-2} \text{B-3} \text{A-3} \text{G-3} \text{F-3} \text{E-3} \text{D-3} \text{C-3} \text{B-4} \text{A-4} \text{G-4} \text{F-4} \text{E-4} \text{D-4} \text{C-4} \text{B-5} \text{A-5} \text{G-5} \text{F-5} \text{E-5} \text{D-5} \text{C-5} \text{B-6} \text{A-6} \text{G-6} \text{F-6} \text{E-6} \text{D-6} \text{C-6} \text{B-7} \text{A-7} \text{G-7} \text{F-7} \text{E-7} \text{D-7} \text{C-7} \text{B-8} \text{A-8} \text{G-8} \text{F-8} \text{E-8} \text{D-8} \text{C-8} \text{B-9} \text{A-9} \text{G-9} \text{F-9} \text{E-9} \text{D-9} \text{C-9} \text{B-10} \text{A-10} \text{G-10} \text{F-10} \text{E-10} \text{D-10} \text{C-10} \text{B-11} \text{A-11} \text{G-11} \text{F-11} \text{E-11} \text{D-11} \text{C-11} \text{B-12} \text{A-12} \text{G-12} \text{F-12} \text{E-12} \text{D-12} \text{C-12} \text{B-13} \text{A-13} \text{G-13} \text{F-13} \text{E-13} \text{D-13} \text{C-13} \text{B-14} \text{A-14} \text{G-14} \text{F-14} \text{E-14} \text{D-14} \text{C-14} \text{B-15} \text{A-15} \text{G-15} \text{F-15} \text{E-15} \text{D-15} \text{C-15} \text{B-16} \text{A-16} \text{G-16} \text{F-16} \text{E-16} \text{D-16} \text{C-16} \text{B-17} \text{A-17} \text{G-17} \text{F-17} \text{E-17} \text{D-17} \text{C-17} \text{B-18} \text{A-18} \text{G-18} \text{F-18} \text{E-18} \text{D-18} \text{C-18} \text{B-19} \text{A-19} \text{G-19} \text{F-19} \text{E-19} \text{D-19} \text{C-19} \text{B-20} \text{A-20} \text{G-20} \text{F-20} \text{E-20} \text{D-20} \text{C-20} \text{B-21} \text{A-21} \text{G-21} \text{F-21} \text{E-21} \text{D-21} \text{C-21} \text{B-22} \text{A-22} \text{G-22} \text{F-22} \text{E-22} \text{D-22} \text{C-22} \text{B-23} \text{A-23} \text{G-23} \text{F-23} \text{E-23} \text{D-23} \text{C-23} \text{B-24} \text{A-24} \text{G-24} \text{F-24} \text{E-24} \text{D-24} \text{C-24} \text{B-25} \text{A-25} \text{G-25} \text{F-25} \text{E-25} \text{D-25} \text{C-25} \text{B-26} \text{A-26} \text{G-26} \text{F-26} \text{E-26} \text{D-26} \text{C-26} \text{B-27} \text{A-27} \text{G-27} \text{F-27} \text{E-27} \text{D-27} \text{C-27} \text{B-28} \text{A-28} \text{G-28} \text{F-28} \text{E-28} \text{D-28} \text{C-28} \text{B-29} \text{A-29} \text{G-29} \text{F-29} \text{E-29} \text{D-29} \text{C-29} \text{B-30} \text{A-30} \text{G-30} \text{F-30} \text{E-30} \text{D-30} \text{C-30} \text{B-31} \text{A-31} \text{G-31} \text{F-31} \text{E-31} \text{D-31} \text{C-31} \text{B-32} \text{A-32} \text{G-32} \text{F-32} \text{E-32} \text{D-32} \text{C-32} \text{B-33} \text{A-33} \text{G-33} \text{F-33} \text{E-33} \text{D-33} \text{C-33} \text{B-34} \text{A-34} \text{G-34} \text{F-34} \text{E-34} \text{D-34} \text{C-34} \text{B-35} \text{A-35} \text{G-35} \text{F-35} \text{E-35} \text{D-35} \text{C-35} \text{B-36} \text{A-36} \text{G-36} \text{F-36} \text{E-36} \text{D-36} \text{C-36} \text{B-37} \text{A-37} \text{G-37} \text{F-37} \text{E-37} \text{D-37} \text{C-37} \text{B-38} \text{A-38} \text{G-38} \text{F-38} \text{E-38} \text{D-38} \text{C-38} \text{B-39} \text{A-39} \text{G-39} \text{F-39} \text{E-39} \text{D-39} \text{C-39} \text{B-40} \text{A-40} \text{G-40} \text{F-40} \text{E-40} \text{D-40} \text{C-40} \text{B-41} \text{A-41} \text{G-41} \text{F-41} \text{E-41} \text{D-41} \text{C-41} \text{B-42} \text{A-42} \text{G-42} \text{F-42} \text{E-42} \text{D-42} \text{C-42} \text{B-43} \text{A-43} \text{G-43} \text{F-43} \text{E-43} \text{D-43} \text{C-43} \text{B-44} \text{A-44} \text{G-44} \text{F-44} \text{E-44} \text{D-44} \text{C-44} \text{B-45} \text{A-45} \text{G-45} \text{F-45} \text{E-45} \text{D-45} \text{C-45} \text{B-46} \text{A-46} \text{G-46} \text{F-46} \text{E-46} \text{D-46} \text{C-46} \text{B-47} \text{A-47} \text{G-47} \text{F-47} \text{E-47} \text{D-47} \text{C-47} \text{B-48} \text{A-48} \text{G-48} \text{F-48} \text{E-48} \text{D-48} \text{C-48} \text{B-49} \text{A-49} \text{G-49} \text{F-49} \text{E-49} \text{D-49} \text{C-49} \text{B-50} \text{A-50} \text{G-50} \text{F-50} \text{E-50} \text{D-50} \text{C-50} \text{B-51} \text{A-51} \text{G-51} \text{F-51} \text{E-51} \text{D-51} \text{C-51} \text{B-52} \text{A-52} \text{G-52} \text{F-52} \text{E-52} \text{D-52} \text{C-52} \text{B-53} \text{A-53} \text{G-53} \text{F-53} \text{E-53} \text{D-53} \text{C-53} \text{B-54} \text{A-54} \text{G-54} \text{F-54} \text{E-54} \text{D-54} \text{C-54} \text{B-55} \text{A-55} \text{G-55} \text{F-55} \text{E-55} \text{D-55} \text{C-55} \text{B-56} \text{A-56} \text{G-56} \text{F-56} \text{E-56} \text{D-56} \text{C-56} \text{B-57} \text{A-57} \text{G-57} \text{F-57} \text{E-57} \text{D-57} \text{C-57} \text{B-58} \text{A-58} \text{G-58} \text{F-58} \text{E-58} \text{D-58} \text{C-58} \text{B-59} \text{A-59} \text{G-59} \text{F-59} \text{E-59} \text{D-59} \text{C-59} \text{B-60} \text{A-60} \text{G-60} \text{F-60} \text{E-60} \text{D-60} \text{C-60} \text{B-61} \text{A-61} \text{G-61} \text{F-61} \text{E-61} \text{D-61} \text{C-61} \text{B-62} \text{A-62} \text{G-62} \text{F-62} \text{E-62} \text{D-62} \text{C-62} \text{B-63} \text{A-63} \text{G-63} \text{F-63} \text{E-63} \text{D-63} \text{C-63} \text{B-64} \text{A-64} \text{G-64} \text{F-64} \text{E-64} \text{D-64} \text{C-64} \text{B-65} \text{A-65} \text{G-65} \text{F-65} \text{E-65} \text{D-65} \text{C-65} \text{B-66} \text{A-66} \text{G-66} \text{F-66} \text{E-66} \text{D-66} \text{C-66} \text{B-67} \text{A-67} \text{G-6$

[illegible]

Example 21

Now it's time to take the fragments studied in Example 19 and put them into expanded sequences through scales using very little picking.

5 7 9 7 5 7 9 5 7 9 7 5 7 9 6 7 9 7 6 7 9

6 7 9 7 6 7 9 7 9 10 9 7 9 10 7 9 10 9 7

9 10 12 10 9 12 10 9 10 12 10 9 11 9 7 9 11 9 7 11 9

7 9 11 9 7 11 9 7 9 11 9 7 10 9 7 9 10 9 7 5

This exercise uses two different three-note-per-string fingerings for the A major scale (A B C# D E F# G#). The ascending pattern is based on the fingering in the 5th position, while the descending pattern uses the 7th position fingering. These are both depicted in the example below.

A major scale (5th position)

5 7 9 5 7 9 6 7 9 6 7 9 7 9 10 7 9 10

A major scale (7th position)

7 9 10 7 9 11 7 9 11 9 10 12 9 10 12

Example 22

The sequence learned in Example 21 can be performed between any two positions using three-note-per-string scale fingerings, or even using random patterns that shift up or down in half-steps without making any reference to a specific tonal area. The latter is demonstrated in the example that follows.

Freely

The example consists of four systems of musical notation, each with a treble staff and a bass staff. The treble staff uses a G-clef and the bass staff uses an F-clef. The key signature has one sharp (F#). The time signature is 3/4. The notation includes various scale patterns with fingerings (4, 6, 8, 7, 5, 9) and slurs. The first system is marked 'Freely' and shows a sequence of three measures with fingerings 4, 6, 8, 6, 4, 6, 8. The second system shows a sequence of three measures with fingerings 4, 6, 8, 6, 4, 6, 8. The third system shows a sequence of three measures with fingerings 5, 7, 9, 7, 5, 9, 7, 5, 9, 7, 5, 9, 7, 5, 9, 7, 5. The fourth system shows a sequence of three measures with fingerings 5, 7, 9, 7, 5, 9, 7, 5, 9, 7, 5, 9, 7, 5, 9, 7, 5.

First system of musical notation. The top staff is in 3/4 time, key of B-flat major. It features a sequence of eighth notes with a slur and a '7' above it. The bottom staff is a TAB line with fret numbers: 6 8 10 8 6 8 10 6 8 10 8 6 8 10 6 8 10 8 6 8 10.

Second system of musical notation. The top staff is in 3/4 time, key of B-flat major. It features a sequence of eighth notes with a slur and a '7' above it. The bottom staff is a TAB line with fret numbers: 6 8 10 8 6 8 10 6 8 10 8 6 8 10 6 8 10 8.

Third system of musical notation. The top staff is in 3/4 time, key of B-flat major. It features a sequence of eighth notes with a slur and a '7' above it. The bottom staff is a TAB line with fret numbers: 6 8 10 8 6 10 8 6 8 10 8 6 10 8 6 8 10 8 6 10 8.

Fourth system of musical notation. The top staff is in 3/4 time, key of B-flat major. It features a sequence of eighth notes with a slur and a '7' above it. The bottom staff is a TAB line with fret numbers: 6 8 10 8 6 10 8 6 8 10 8 6 10 8 6 8 10 8 6 10 8.

Fifth system of musical notation. The top staff is in 3/4 time, key of B-flat major. It features a sequence of eighth notes with a slur and a '5' above it. The bottom staff is a TAB line with fret numbers: 5 7 9 7 5 4 6 8 6 4 3 5 7 5 3. The system concludes with a 'semi harm.' (semitone harmonic) technique, indicated by a wavy line and a '1' above the staff, and a '(5)' in the TAB line.

Example 23A

This legato pattern is in the key of E aeolian minor (E F# G A B C D) and requires a variety of shifts from the left hand. Example 23A is written out in steady sixteenth notes (four notes per beat) in an effort to make the passage more accessible. This exercise also employs fretboard tapping, which is indicated by a "+" above the notation and TAB staves. Here's the example as it is performed slow, out of time.

System 1: Musical staff shows a sequence of sixteenth notes starting on E4. TAB: 2 3 5 3 2 3 5 | 2 3 5 3 2 3 5 7 5 | 3 5 7 | 4 5 7 5 4 5 7 | 4 5 7 5 4 5

System 2: Musical staff continues the sequence. TAB: 7 9 7 5 7 9 | 7 8 10 8 7 8 10 | 7 8 10 | 8 7 8 10 12 10 8 10 12 15 12 15 12 10 8 10

System 3: Musical staff continues the sequence. TAB: 12 17 12 17 12 10 8 10 12 15 12 15 12 10 8 10 | 12 10 8 7 8 10 8 7 | 10 8 7 8 10 8 7 9

System 4: Musical staff continues the sequence. TAB: 7 5 7 9 7 5 4 5 7 5 4 | 7 5 4 5 7 | 5 4 | 7 5 3 5 7 5 3 2 3 5 3 2 | 5 3 | 2 3 5 3 2 0

Example 23B

When this exercise is performed to a steady pulse, it yields an array of unusual rhythmic subdivisions (note the groupings of 5). When written out in this manner, it becomes apparent that the ascending figure is based on a singular one-octave legato sequence that is then transposed up into the guitar's higher register. In analysis of the first measure, notice how the notes confined to this measure are repeated verbatim in the second measure, only one octave higher, then in the next higher octave in the third measure. Each octave is demonstrated independently in the audio. This is followed by the tapping section which is confined to the fourth bar. The remaining bars involve a descending version of the original one-bar lick transposed to each lower octave.

$\text{♩} = 184$

System 1: Musical staff shows an ascending sequence of eighth notes with triplets and quintuplets. TAB: 2 3 5 3 2 3 5 2 3 5 3 2 3 5 7 5 3 5 7 4 5 7 5 4 5 7 4 5 7 5 4 5 7 9 7 5 7 9.

System 2: Musical staff continues the ascending sequence with tapping. TAB: 7 8 10 8 7 8 10 7 8 10 8 7 8 10 12 10 8 10 12 15 12 15 12 10 8 10 12 17 12 17 12 10 8 10 12 15 12 15.

System 3: Musical staff shows a descending sequence of eighth notes. TAB: 12 10 8 10 12 10 8 7 8 10 8 7 10 8 7 8 10 8 7 9 7 5 7 9 7 5 4 5 7 5 4 7 5 3 5 7 5 3.

System 4: Musical staff concludes with a descending sequence and a final 'hold' instruction. TAB: 7 5 3 5 7 5 3 2 3 5 3 2 5 3 2 3 5 3 2 0.

Part VIII

Right Hand Technique

(Sweep-Picking)

Another type of left hand technique is often referred to as "sweep-picking." In some circles this technique is sometimes called "economy-picking." Typically, this technique is applied to arpeggiated shapes, as opposed to scalar examples, to achieve a fast flurry of notes.

In the exercises that follow, each arpeggiated shape involves primarily one note on each string. When played simultaneously, some of these shapes may even be reminiscent of some familiar moveable barre chord shapes. However, when using them in conjunction with sweep-picking, it is important to separate each of the notes played by the left hand by pressing them to the fretboard one note at a time. Don't let each note ring into the next so as to avoid creating a chordal sound. The "sweeping" aspect is the central component of this technique. When attempting to execute any sweep-picking passage, it is important that the pick articulate each string separately, in sync with the left hand, instead of using a strumming motion. To accomplish this, after picking the first note with a down-stroke, allow the pick to fall into the next string so that it rests up against it. Next, push the pick right on through this higher string and continue this motion until the pick has passed through each of the strings indicated, using one smooth "sweeping" motion. For the descending version of an arpeggio shape, use this same type of motion, beginning with an up-stroke on the higher string, pushing through to each lower adjacent string.

Example 24

8va throughout

The first system of music shows an ascending arpeggio shape. The guitar staff has a treble clef and a key signature of one sharp (F#). The notes are: E4 (fret 12), F#4 (fret 13), G4 (fret 14), A4 (fret 15), B4 (fret 12), A4 (fret 13), G4 (fret 14), F#4 (fret 15), E4 (fret 12), D4 (fret 13), C4 (fret 14), B3 (fret 15), A3 (fret 12), G3 (fret 13), F#3 (fret 14), E3 (fret 15), D3 (fret 12), C3 (fret 13), B2 (fret 14), A2 (fret 15), G2 (fret 12), F#2 (fret 13), E2 (fret 14), D2 (fret 15), C2 (fret 12), B1 (fret 13), A1 (fret 14), G1 (fret 15), F#1 (fret 12), E1 (fret 13), D1 (fret 14), C1 (fret 15), B0 (fret 12), A0 (fret 13), G0 (fret 14), F#0 (fret 15), E0 (fret 12), D0 (fret 13), C0 (fret 14), B-1 (fret 15), A-1 (fret 12), G-1 (fret 13), F#-1 (fret 14), E-1 (fret 15), D-1 (fret 12), C-1 (fret 13), B-2 (fret 14), A-2 (fret 15), G-2 (fret 12), F#-2 (fret 13), E-2 (fret 14), D-2 (fret 15), C-2 (fret 12), B-3 (fret 13), A-3 (fret 14), G-3 (fret 15), F#-3 (fret 12), E-3 (fret 13), D-3 (fret 14), C-3 (fret 15), B-4 (fret 12), A-4 (fret 13), G-4 (fret 14), F#-4 (fret 15), E-4 (fret 12), D-4 (fret 13), C-4 (fret 14), B-5 (fret 15), A-5 (fret 12), G-5 (fret 13), F#-5 (fret 14), E-5 (fret 15), D-5 (fret 12), C-5 (fret 13), B-6 (fret 14), A-6 (fret 15), G-6 (fret 12), F#-6 (fret 13), E-6 (fret 14), D-6 (fret 15), C-6 (fret 12), B-7 (fret 13), A-7 (fret 14), G-7 (fret 15), F#-7 (fret 12), E-7 (fret 13), D-7 (fret 14), C-7 (fret 15), B-8 (fret 12), A-8 (fret 13), G-8 (fret 14), F#-8 (fret 15), E-8 (fret 12), D-8 (fret 13), C-8 (fret 14), B-9 (fret 15), A-9 (fret 12), G-9 (fret 13), F#-9 (fret 14), E-9 (fret 15), D-9 (fret 12), C-9 (fret 13), B-10 (fret 14), A-10 (fret 15), G-10 (fret 12), F#-10 (fret 13), E-10 (fret 14), D-10 (fret 15), C-10 (fret 12), B-11 (fret 13), A-11 (fret 14), G-11 (fret 15), F#-11 (fret 12), E-11 (fret 13), D-11 (fret 14), C-11 (fret 15), B-12 (fret 12), A-12 (fret 13), G-12 (fret 14), F#-12 (fret 15), E-12 (fret 12), D-12 (fret 13), C-12 (fret 14), B-13 (fret 15), A-13 (fret 12), G-13 (fret 13), F#-13 (fret 14), E-13 (fret 15), D-13 (fret 12), C-13 (fret 13), B-14 (fret 14), A-14 (fret 15), G-14 (fret 12), F#-14 (fret 13), E-14 (fret 14), D-14 (fret 15), C-14 (fret 12), B-15 (fret 13), A-15 (fret 14), G-15 (fret 15), F#-15 (fret 12), E-15 (fret 13), D-15 (fret 14), C-15 (fret 15), B-16 (fret 12), A-16 (fret 13), G-16 (fret 14), F#-16 (fret 15), E-16 (fret 12), D-16 (fret 13), C-16 (fret 14), B-17 (fret 15), A-17 (fret 12), G-17 (fret 13), F#-17 (fret 14), E-17 (fret 15), D-17 (fret 12), C-17 (fret 13), B-18 (fret 14), A-18 (fret 15), G-18 (fret 12), F#-18 (fret 13), E-18 (fret 14), D-18 (fret 15), C-18 (fret 12), B-19 (fret 13), A-19 (fret 14), G-19 (fret 15), F#-19 (fret 12), E-19 (fret 13), D-19 (fret 14), C-19 (fret 15), B-20 (fret 12), A-20 (fret 13), G-20 (fret 14), F#-20 (fret 15), E-20 (fret 12), D-20 (fret 13), C-20 (fret 14), B-21 (fret 15), A-21 (fret 12), G-21 (fret 13), F#-21 (fret 14), E-21 (fret 15), D-21 (fret 12), C-21 (fret 13), B-22 (fret 14), A-22 (fret 15), G-22 (fret 12), F#-22 (fret 13), E-22 (fret 14), D-22 (fret 15), C-22 (fret 12), B-23 (fret 13), A-23 (fret 14), G-23 (fret 15), F#-23 (fret 12), E-23 (fret 13), D-23 (fret 14), C-23 (fret 15), B-24 (fret 12), A-24 (fret 13), G-24 (fret 14), F#-24 (fret 15), E-24 (fret 12), D-24 (fret 13), C-24 (fret 14), B-25 (fret 15), A-25 (fret 12), G-25 (fret 13), F#-25 (fret 14), E-25 (fret 15), D-25 (fret 12), C-25 (fret 13), B-26 (fret 14), A-26 (fret 15), G-26 (fret 12), F#-26 (fret 13), E-26 (fret 14), D-26 (fret 15), C-26 (fret 12), B-27 (fret 13), A-27 (fret 14), G-27 (fret 15), F#-27 (fret 12), E-27 (fret 13), D-27 (fret 14), C-27 (fret 15), B-28 (fret 12), A-28 (fret 13), G-28 (fret 14), F#-28 (fret 15), E-28 (fret 12), D-28 (fret 13), C-28 (fret 14), B-29 (fret 15), A-29 (fret 12), G-29 (fret 13), F#-29 (fret 14), E-29 (fret 15), D-29 (fret 12), C-29 (fret 13), B-30 (fret 14), A-30 (fret 15), G-30 (fret 12), F#-30 (fret 13), E-30 (fret 14), D-30 (fret 15), C-30 (fret 12), B-31 (fret 13), A-31 (fret 14), G-31 (fret 15), F#-31 (fret 12), E-31 (fret 13), D-31 (fret 14), C-31 (fret 15), B-32 (fret 12), A-32 (fret 13), G-32 (fret 14), F#-32 (fret 15), E-32 (fret 12), D-32 (fret 13), C-32 (fret 14), B-33 (fret 15), A-33 (fret 12), G-33 (fret 13), F#-33 (fret 14), E-33 (fret 15), D-33 (fret 12), C-33 (fret 13), B-34 (fret 14), A-34 (fret 15), G-34 (fret 12), F#-34 (fret 13), E-34 (fret 14), D-34 (fret 15), C-34 (fret 12), B-35 (fret 13), A-35 (fret 14), G-35 (fret 15), F#-35 (fret 12), E-35 (fret 13), D-35 (fret 14), C-35 (fret 15), B-36 (fret 12), A-36 (fret 13), G-36 (fret 14), F#-36 (fret 15), E-36 (fret 12), D-36 (fret 13), C-36 (fret 14), B-37 (fret 15), A-37 (fret 12), G-37 (fret 13), F#-37 (fret 14), E-37 (fret 15), D-37 (fret 12), C-37 (fret 13), B-38 (fret 14), A-38 (fret 15), G-38 (fret 12), F#-38 (fret 13), E-38 (fret 14), D-38 (fret 15), C-38 (fret 12), B-39 (fret 13), A-39 (fret 14), G-39 (fret 15), F#-39 (fret 12), E-39 (fret 13), D-39 (fret 14), C-39 (fret 15), B-40 (fret 12), A-40 (fret 13), G-40 (fret 14), F#-40 (fret 15), E-40 (fret 12), D-40 (fret 13), C-40 (fret 14), B-41 (fret 15), A-41 (fret 12), G-41 (fret 13), F#-41 (fret 14), E-41 (fret 15), D-41 (fret 12), C-41 (fret 13), B-42 (fret 14), A-42 (fret 15), G-42 (fret 12), F#-42 (fret 13), E-42 (fret 14), D-42 (fret 15), C-42 (fret 12), B-43 (fret 13), A-43 (fret 14), G-43 (fret 15), F#-43 (fret 12), E-43 (fret 13), D-43 (fret 14), C-43 (fret 15), B-44 (fret 12), A-44 (fret 13), G-44 (fret 14), F#-44 (fret 15), E-44 (fret 12), D-44 (fret 13), C-44 (fret 14), B-45 (fret 15), A-45 (fret 12), G-45 (fret 13), F#-45 (fret 14), E-45 (fret 15), D-45 (fret 12), C-45 (fret 13), B-46 (fret 14), A-46 (fret 15), G-46 (fret 12), F#-46 (fret 13), E-46 (fret 14), D-46 (fret 15), C-46 (fret 12), B-47 (fret 13), A-47 (fret 14), G-47 (fret 15), F#-47 (fret 12), E-47 (fret 13), D-47 (fret 14), C-47 (fret 15), B-48 (fret 12), A-48 (fret 13), G-48 (fret 14), F#-48 (fret 15), E-48 (fret 12), D-48 (fret 13), C-48 (fret 14), B-49 (fret 15), A-49 (fret 12), G-49 (fret 13), F#-49 (fret 14), E-49 (fret 15), D-49 (fret 12), C-49 (fret 13), B-50 (fret 14), A-50 (fret 15), G-50 (fret 12), F#-50 (fret 13), E-50 (fret 14), D-50 (fret 15), C-50 (fret 12), B-51 (fret 13), A-51 (fret 14), G-51 (fret 15), F#-51 (fret 12), E-51 (fret 13), D-51 (fret 14), C-51 (fret 15), B-52 (fret 12), A-52 (fret 13), G-52 (fret 14), F#-52 (fret 15), E-52 (fret 12), D-52 (fret 13), C-52 (fret 14), B-53 (fret 15), A-53 (fret 12), G-53 (fret 13), F#-53 (fret 14), E-53 (fret 15), D-53 (fret 12), C-53 (fret 13), B-54 (fret 14), A-54 (fret 15), G-54 (fret 12), F#-54 (fret 13), E-54 (fret 14), D-54 (fret 15), C-54 (fret 12), B-55 (fret 13), A-55 (fret 14), G-55 (fret 15), F#-55 (fret 12), E-55 (fret 13), D-55 (fret 14), C-55 (fret 15), B-56 (fret 12), A-56 (fret 13), G-56 (fret 14), F#-56 (fret 15), E-56 (fret 12), D-56 (fret 13), C-56 (fret 14), B-57 (fret 15), A-57 (fret 12), G-57 (fret 13), F#-57 (fret 14), E-57 (fret 15), D-57 (fret 12), C-57 (fret 13), B-58 (fret 14), A-58 (fret 15), G-58 (fret 12), F#-58 (fret 13), E-58 (fret 14), D-58 (fret 15), C-58 (fret 12), B-59 (fret 13), A-59 (fret 14), G-59 (fret 15), F#-59 (fret 12), E-59 (fret 13), D-59 (fret 14), C-59 (fret 15), B-60 (fret 12), A-60 (fret 13), G-60 (fret 14), F#-60 (fret 15), E-60 (fret 12), D-60 (fret 13), C-60 (fret 14), B-61 (fret 15), A-61 (fret 12), G-61 (fret 13), F#-61 (fret 14), E-61 (fret 15), D-61 (fret 12), C-61 (fret 13), B-62 (fret 14), A-62 (fret 15), G-62 (fret 12), F#-62 (fret 13), E-62 (fret 14), D-62 (fret 15), C-62 (fret 12), B-63 (fret 13), A-63 (fret 14), G-63 (fret 15), F#-63 (fret 12), E-63 (fret 13), D-63 (fret 14), C-63 (fret 15), B-64 (fret 12), A-64 (fret 13), G-64 (fret 14), F#-64 (fret 15), E-64 (fret 12), D-64 (fret 13), C-64 (fret 14), B-65 (fret 15), A-65 (fret 12), G-65 (fret 13), F#-65 (fret 14), E-65 (fret 15), D-65 (fret 12), C-65 (fret 13), B-66 (fret 14), A-66 (fret 15), G-66 (fret 12), F#-66 (fret 13), E-66 (fret 14), D-66 (fret 15), C-66 (fret 12), B-67 (fret 13), A-67 (fret 14), G-67 (fret 15), F#-67 (fret 12), E-67 (fret 13), D-67 (fret 14), C-67 (fret 15), B-68 (fret 12), A-68 (fret 13), G-68 (fret 14), F#-68 (fret 15), E-68 (fret 12), D-68 (fret 13), C-68 (fret 14), B-69 (fret 15), A-69 (fret 12), G-69 (fret 13), F#-69 (fret 14), E-69 (fret 15), D-69 (fret 12), C-69 (fret 13), B-70 (fret 14), A-70 (fret 15), G-70 (fret 12), F#-70 (fret 13), E-70 (fret 14), D-70 (fret 15), C-70 (fret 12), B-71 (fret 13), A-71 (fret 14), G-71 (fret 15), F#-71 (fret 12), E-71 (fret 13), D-71 (fret 14), C-71 (fret 15), B-72 (fret 12), A-72 (fret 13), G-72 (fret 14), F#-72 (fret 15), E-72 (fret 12), D-72 (fret 13), C-72 (fret 14), B-73 (fret 15), A-73 (fret 12), G-73 (fret 13), F#-73 (fret 14), E-73 (fret 15), D-73 (fret 12), C-73 (fret 13), B-74 (fret 14), A-74 (fret 15), G-74 (fret 12), F#-74 (fret 13), E-74 (fret 14), D-74 (fret 15), C-74 (fret 12), B-75 (fret 13), A-75 (fret 14), G-75 (fret 15), F#-75 (fret 12), E-75 (fret 13), D-75 (fret 14), C-75 (fret 15), B-76 (fret 12), A-76 (fret 13), G-76 (fret 14), F#-76 (fret 15), E-76 (fret 12), D-76 (fret 13), C-76 (fret 14), B-77 (fret 15), A-77 (fret 12), G-77 (fret 13), F#-77 (fret 14), E-77 (fret 15), D-77 (fret 12), C-77 (fret 13), B-78 (fret 14), A-78 (fret 15), G-78 (fret 12), F#-78 (fret 13), E-78 (fret 14), D-78 (fret 15), C-78 (fret 12), B-79 (fret 13), A-79 (fret 14), G-79 (fret 15), F#-79 (fret 12), E-79 (fret 13), D-79 (fret 14), C-79 (fret 15), B-80 (fret 12), A-80 (fret 13), G-80 (fret 14), F#-80 (fret 15), E-80 (fret 12), D-80 (fret 13), C-80 (fret 14), B-81 (fret 15), A-81 (fret 12), G-81 (fret 13), F#-81 (fret 14), E-81 (fret 15), D-81 (fret 12), C-81 (fret 13), B-82 (fret 14), A-82 (fret 15), G-82 (fret 12), F#-82 (fret 13), E-82 (fret 14), D-82 (fret 15), C-82 (fret 12), B-83 (fret 13), A-83 (fret 14), G-83 (fret 15), F#-83 (fret 12), E-83 (fret 13), D-83 (fret 14), C-83 (fret 15), B-84 (fret 12), A-84 (fret 13), G-84 (fret 14), F#-84 (fret 15), E-84 (fret 12), D-84 (fret 13), C-84 (fret 14), B-85 (fret 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13), B-94 (fret 14), A-94 (fret 15), G-94 (fret 12), F#-94 (fret 13), E-94 (fret 14), D-94 (fret 15), C-94 (fret 12), B-95 (fret 13), A-95 (fret 14), G-95 (fret 15), F#-95 (fret 12), E-95 (fret 13), D-95 (fret 14), C-95 (fret 15), B-96 (fret 12), A-96 (fret 13), G-96 (fret 14), F#-96 (fret 15), E-96 (fret 12), D-96 (fret 13), C-96 (fret 14), B-97 (fret 15), A-97 (fret 12), G-97 (fret 13), F#-97 (fret 14), E-97 (fret 15), D-97 (fret 12), C-97 (fret 13), B-98 (fret 14), A-98 (fret 15), G-98 (fret 12), F#-98 (fret 13), E-98 (fret 14), D-98 (fret 15), C-98 (fret 12), B-99 (fret 13), A-99 (fret 14), G-99 (fret 15), F#-99 (fret 12), E-99 (fret 13), D-99 (fret 14), C-99 (fret 15), B-100 (fret 12), A-100 (fret 13), G-100 (fret 14), F#-100 (fret 15), E-100 (fret 12), D-100 (fret 13), C-100 (fret 14), B-101 (fret 15), A-101 (fret 12), G-101 (fret 13), F#-101 (fret 14), E-101 (fret 15), D-101 (fret 12), C-101 (fret 13), B-102 (fret 14), A-102 (fret 15), G-102 (fret 12), F#-102 (fret 13), E-102 (fret 14), D-102 (fret 15), C-102 (fret 12), B-103 (fret 13), A-103 (fret 14), G-103 (fret 15), F#-103 (fret 12), E-103 (fret 13), D-103 (fret 14), C-103 (fret 15), B-104 (fret 12), A-104 (fret 13), G-104 (fret 14), F#-104 (fret 15), E-104 (fret 12), D-104 (fret 13), C-104 (fret 14), B-105 (fret 15), A-105 (fret 12), G-105 (fret 13), F#-105 (fret 14), E-105 (fret 15), D-105 (fret 12), C-105 (fret 13), B-106 (fret 14), A-106 (fret 15), G-106 (fret 12), F#-106 (fret 13), E-106 (fret 14), D-106 (fret 15), C-106 (fret 12), B-107 (fret 13), A-107 (fret 14), G-107 (fret 15), F#-107 (fret 12), E-107 (fret 13), D-107 (fret 14), C-107 (fret 15), B-108 (fret 12), A-108 (fret 13), G-108 (fret 14), F#-108 (fret 15), E-108 (fret 12), D-108 (fret 13), C-108 (fret 14), B-109 (fret 15), A-109 (fret 12), G-109 (fret 13), F#-109 (fret 14), E-109 (fret 15), D-109 (fret 12), C-109 (fret 13), B-110 (fret 14), A-110 (fret 15), G-110 (fret 12), F#-110 (fret 13), E-110 (fret 14), D-110 (fret 15), C-110 (fret 12), B-111 (fret 13), A-111 (fret 14), G-111 (fret 15), F#-111 (fret 12), E-111 (fret 13), D-111 (fret 14), C-111 (fret 15), B-112 (fret 12), A-112 (fret 13), G-112 (fret 14), F#-112 (fret 15), E-112 (fret 12), D-112 (fret 13), C-112 (fret 14), B-113 (fret 15), A-113 (fret 12), G-113 (fret 13), F#-113 (fret 14), E-113 (fret 15), D-113 (fret 12), C-113 (fret 13), B-114 (fret 14), A-114 (fret 15), G-114 (fret 12), F#-114 (fret 13), E-114 (fret 14), D-114 (fret 15), C-114 (fret 12), B-115 (fret 13), A-115 (fret 14), G-115 (fret 15), F#-115 (fret 12), E-115 (fret 13), D-115 (fret 14), C-115 (fret 15), B-116 (fret 12), A-116 (fret 13), G-116 (fret 14), F#-116 (fret 15), E-116 (fret 12), D-116 (fret 13), C-116 (fret 14), B-117 (fret 15), A-117 (fret 12), G-117 (fret 13), F#-117 (fret 14), E-117 (fret 15), D-117 (fret 12), C-117 (fret 13), B-118 (fret 14), A-118 (fret 15), G-118 (fret 12), F#-118 (fret 13), E-118 (fret 14), D-118 (fret 15), C-118 (fret 12), B-119 (fret 13), A-119 (fret 14), G-119 (fret 15), F#-119 (fret 12), E-119 (fret 13), D-119 (fret 14), C-119 (fret 15), B-120 (fret 12), A-120 (fret 13), G-120 (fret 14), F#-120 (fret 15), E-120 (fret 12), D-120 (fret 13), C-120 (fret 14), B-121 (fret 15), A-121 (fret 12), G-121 (fret 13), F#-121 (fret 14), E-121 (fret 15), D-121 (fret 12), C-121 (fret 13), B-122 (fret 14), A-122 (fret 15), G-122 (fret 12), F#-122 (fret 13), E-122 (fret 14), D-122 (fret 15), C-122 (fret 12), B-123 (fret 13), A-123 (fret 14), G-123 (fret 15), F#-123 (fret 12), E-123 (fret 13), D-123 (fret 14), C-123 (fret 15), B-124 (fret 12), A-124 (fret 13), G-124 (fret 14), F#-124 (fret 15), E-124 (fret 12), D-124 (fret 13), C-124 (fret 14), B-125 (fret 15), A-125 (fret 12), G-125 (fret 13), F#-125 (fret 14), E-125 (fret 15), D-125 (fret 12), C-125 (fret 13), B-126 (fret 14), A-126 (fret 15), G-126 (fret 12), F#-126 (fret 13), E-126 (fret 14), D-126 (fret 15), C-126 (fret 12), B-127 (fret 13), A-127 (fret 14), G-127 (fret 15), F#-127 (fret 12), E-127 (fret 13), D-127 (fret 14), C-127 (fret 15), B-128 (fret 12), A-128 (fret 13), G-128 (fret 14), F#-128 (fret 15), E-128 (fret 12), D-128 (fret 13), C-128 (fret 14), B-129 (fret 15), A-129 (fret 12), G-129 (fret 13), F#-129 (fret 14), E-129 (fret 15), D-129 (fret 12), C-129 (fret 13), B-130 (fret 14), A-130 (fret 15), G-130 (fret 12), F#-130 (fret 13), E-130 (fret 14), D-130 (fret 15), C-130 (fret 12), B-131 (fret 13), A-131 (fret 14), G-131 (fret 15), F#-131 (fret 12), E-131 (fret 13), D-131 (fret 14), C-131 (fret 15), B-132 (fret 12), A-132 (fret 13), G-132 (fret 14), F#-132 (fret 15), E-132 (fret 12), D-132 (fret 13), C-132 (fret 14), B-133 (fret 15), A-133 (fret 12), G-133 (fret 13), F#-133 (fret 14), E-133 (fret 15), D-133 (fret 12), C-133 (fret 13), B-134 (fret 14), A-134 (fret 15), G-134 (fret 12), F#-134 (fret 13), E-134 (fret 14), D-134 (fret 15), C-134 (fret 12), B-135 (fret 13), A-135 (fret 14), G-135 (fret 15), F#-135 (fret 12), E-135 (fret 13), D-135 (fret 14), C-135 (fret 15), B-136 (fret 12), A-136 (fret 13), G-136 (fret 14), F#-136 (fret 15), E-136 (fret 12), D-136 (fret 13), C-136 (fret 14), B-137 (fret 15), A-137 (fret 12), G-137 (fret 13), F#-137 (fret 14), E-137 (fret 15), D-137 (fret 12), C-137 (fret 13), B-138 (fret 14), A-138 (fret 15), G-138 (fret 12), F#-138 (fret 13), E-138 (fret 14), D-138 (fret 15), C-138 (fret 12), B-139 (fret 13), A-139 (fret 14), G-139 (fret 15), F#-139 (fret 12), E-139 (fret 13), D-139 (fret 14), C-139 (fret 15), B-140 (fret 12), A-140 (fret 13), G-140 (fret 14), F#-140 (fret 15), E-140 (fret 12), D-140 (fret 13), C-140 (fret 14), B-141 (fret 15), A-141 (fret 12), G-141 (fret 13), F#-141 (fret 14), E-141 (fret 15), D-141 (fret 12), C-141 (fret 13), B-142 (fret 14), A-142 (fret 15), G-142 (fret 12), F#-142 (fret 13), E-142 (fret 14), D-142 (fret 15), C-142 (fret 12), B-143 (fret 13), A-143 (fret 14), G-143 (fret 15), F#-143 (fret 12), E-143 (fret 13), D-143 (fret 14), C-143 (f

Example 25

These types of shapes are not unlike some of the finger patterns encountered in the earlier warm-up exercises where “mirror shapes” were used. Here’s the same exercise transferred to the next lower set of strings.

8va throughout

Example 26

This next exercise involves the same types of shapes encountered in the previous examples, only each left hand finger is stretched to access a different arrangement of notes. In the accompanying audio, this exercise is played up to speed at 176 beats per minute.

Example 27A

Here's one more sweep-picking exercise. This one is applied to triadic arpeggios. The note sequence of this exercise implies the chord progression D, F#, E/G#, A. Example 27A depicts this exercise in steady eighth notes and is an exact transcription of the audio. Notice that the F# and A arpeggios are the same fingerings used in the picking warm-up exercises in Example 4.

System 1: Moderato

Chorus: D F#

Verse: D F#

System 2: Allegretto

Chorus: E/G# A

Verse: E/G# A

Example 27B

When played to a steady tempo, in order for each new chord change to land squarely on a beat, the descending versions of these arpeggios involve the performance of some odd rhythmic groupings. Notice how seven notes are crammed into the space of one beat on beats 2 and 4 of each measure.

The musical score for "The Wind" by Peter Max is presented in two systems. The first system features a guitar staff in 4/4 time with a key signature of one sharp (F#). The guitar part consists of a melodic line with eighth and sixteenth notes, and a bass line with a repeating eighth-note pattern. The guitar staff is labeled with "D/F#" and "F#" above the first and second measures, respectively. The bass staff is labeled "T" and "B" on the left, and contains a sequence of fret numbers (14, 17, 16, 14, 15, 14, 15, 14, 16, 17, 14, 14, 16, 16, 15, 14, 14, 18, 14, 14, 15, 16, 16, 14) corresponding to the notes. The second system features a guitar staff in 4/4 time with a key signature of one sharp (F#). The guitar part consists of a melodic line with eighth and sixteenth notes, and a bass line with a repeating eighth-note pattern. The guitar staff is labeled with "E/G#" and "A" above the first and second measures, respectively. The bass staff is labeled "T" and "B" on the left, and contains a sequence of fret numbers (16, 19, 18, 16, 17, 16, 17, 16, 18, 19, 16, 17, 19, 19, 18, 17, 17, 21, 17, 17, 18, 19, 19, 17) corresponding to the notes. The word "simile" is written below the first measure of the guitar staff in the second system.

Part IX

Chordal Technique

(Building Chords)

Up to this point, much of the material has focused on technique and developing chops. Now it's time to switch gears and concentrate on building an effective chord vocabulary.

Example 28A

The examples that follow provide an armful of ever-faithful "power chords" (root and fifth), and mutated by including certain notes for added color and drama to the basic chord progression. Below is a common sequence of "power chords".

B5A5D5/AG5E5

Example 28B

"Power chords" can be voiced in a few different ways. Since there are only two different notes in a chord (root and fifth), that automatically limits the number of variations the chord can have. Chord 1 below is a basic B "power chord" which consists of the root (B) and its fifth (F#). The B can be doubled one octave higher (Chord 2) as one variation. The fifth can also be played on the lowest sounding string, yielding the chord B5/F# (Chord 3).

1. B52. B53. B5/F#

Example 28C

Putting the fifth in the bass of a power chord is also an extremely effective compositional device that adds some meat to the texture of a song, especially if the bass player is playing the chord's root note below it.

Chord symbols: B5/F# C5/G D5/A B5/F#

	1	2	3	4
T				
A	4	5	7	4
B	2	3	5	2

Example 28D

One other type of power chord involves the addition of the chord's 9th (over a B5 chord the ninth is C#) to the basic root and fifth chord structure. On the fingerboard, this actually takes on the physical appearance of two power chords stacked on top of one another.

Chord symbols: B5/F#C# C5/GA D5/AB B5/F#C#

	1	2	3	4
T	6	6	4	6
A	4	4	4	4
B	2	2	2	2

In order to thoroughly understand where chord tones and chord extensions originate, it is necessary to become familiar with the scales from which these notes are derived. Below are some common one-octave fingerings for the C major (Ionian), C minor (Aeolian) and C Mixolydian scales (R = root, 2 = 2nd note of the scale, etc.). Immediately to the right of each of these scales is an arpeggio beginning with the note C. These arpeggios access every other note of the scale. In the case of the C major scale — the scale's root (C), third (E), fifth (G), seventh (B), etc. It is this pattern that can be used to form a variety of different sounding chords, each with C as their root note. When the notes C, E, G and B (R - 3 - 5 - 7) are sounded simultaneously, the sonority that is generated is called a major seventh chord. That's because the chord consists of a major triad, spelled: R (C) 3 (E) 5 (G), and the next successive chord tone, the seventh (B). In chord construction, after the seventh note of a scale ("B" in this case), the notes that follow go beyond one octave and begin to access what are called "extensions." The ninth (D) is one octave and a whole step above the root note (C), but it is still really as if the second note of the scale were to be played in a stepwise manner from its point of origin (that's why the "2" is in parentheses next to the "9"). However, if a chord that's being played already consists of the four notes from the scale's arpeggio all the way up to the seventh, any additional note functions as an extension. That's where chord symbols like Cmaj9, Cmaj11 and Cmaj13 come from.

C major (Ionian) *C major (Ionian) chord tones and extensions*

R 2 3 4 5 6 7 R R 3 5 7 9(2) 11(4) 13(6) R

T A B 3 5 7 3 5 7 4 5 3 7 5 4 7 6 5 8

C minor (Aeolian) *C minor (Aeolian) chord tones and extensions*

R 2 b3 4 5 b6 b7 R R b3 5 b7 9(2) 11(4) b13(b6) R

T A B 3 5 6 3 5 6 3 5 3 6 5 3 7 6 4 8

C Mixolydian *C Mixolydian chord tones and extensions*

R 2 3 4 5 6 b7 R 1 3 5 b7 9(2) 11(4) 13(6) R

T A B 3 5 7 3 5 7 3 5 3 7 5 3 7 6 5 8

Example 29

Below are variations of a simple power chord altered with the addition of just one note:

- C5 is the basic power chord.
- Add the 3rd note from the C major scale (E) to create a C major chord (C).
- Add the minor 3rd (E \flat), borrowed from the C minor (Aeolian) scale, for a C minor chord (Cm).
- C $\text{sus}2$ is the result of adding the 2nd note from the major scale (D). Remember, since this chord does not contain the 3rd, the D functions as a 2nd instead of a 9th.
- Introduce the fourth note of the major scale (F) to the basic power chord to form C sus . Since there isn't a 3rd present, the 4th is seen as suspending the 3rd to a 4th instead of functioning as an added 11th.

C5 C Cm C $\text{sus}2$ C sus

T A B 5 5 3 3 6 5 5 5 5

Example 30

Now let's repeat the process but this time add two notes to the C5 chord:

- Add the major third (E) and the major seventh (B) and you have a Cmaj7 chord.
- The addition of the minor third (Eb) and minor seventh (Bb) Cm7. If the major third (E) and minor seventh (Bb) are added to the C5, this yields the dominant chord C7.

Example 30 shows three chords: Cmaj7, Cm7, and C7. The notation includes a staff with a treble clef and a guitar fretboard diagram below it. The fretboard diagram shows the positions of the notes for each chord on the strings (T, A, B).

Chord	T (Treble)	A (Acoustic)	B (Bass)
Cmaj7	5	4	3
Cm7	4	3	3
C7	5	5	5

Example 31

Now add a 9th (D) to the top of the major and minor triads.

- C(9) can be described as a C5 with major 3rd (E) and the 9th (D) added.
- Cm(9) involves the addition of the minor third (Eb) and the ninth (D) to the C5.

Example 31 shows two chords: C(9) and Cm(9). The notation includes a staff with a treble clef and a guitar fretboard diagram below it. The fretboard diagram shows the positions of the notes for each chord on the strings (T, A, B).

Chord	T (Treble)	A (Acoustic)	B (Bass)
C(9)	5	7	3
Cm(9)	4	7	3

Example 32

Now let's include the 11th:

- When added to the power chord, the addition of the major third (E) and the eleventh (F) creates a C(11).
- Add the minor third (Eb), minor seventh (Bb) and the eleventh (F) and you have a Cm11 chord. This chord voicing is arranged in a manner that allows for the 5th (G) to be played in the bass.

Example 32 shows two chords: C(11) and Cm11. The notation includes a staff with a treble clef and a guitar fretboard diagram below it. The fretboard diagram shows the positions of the notes for each chord on the strings (T, A, B).

Chord	T (Treble)	A (Acoustic)	B (Bass)
C(11)	1	5	3
Cm11	4	3	3

Example 33A

With this new information, it now becomes possible to take a basic chord progression, consisting of only power chords, and develop the sound of the chords to add some spice. For example, let's take a typical chord progression involving the chords A5, F5 and G5.

Example 33A shows a progression of three power chords: A5, F5, and G5. The notation includes a treble clef staff with notes and a guitar TAB staff with fret numbers.

Chord	Treble Staff Notes	Tab Staff Frets
A5	A2, E3	7 (low E), 5 (A)
F5	F2, C3	3 (low F), 1 (C)
G5	G2, D3	5 (low G), 3 (D)

Example 33B

You can make these simple chords sound much more interesting by:

- Taking the A5 and adding the minor 3rd (C) and 9th (B), creating an Am(9th).
- The F5 chord is transformed into Fsus2 with the addition of the 2nd (G).
- The G5 chord is mutated into Gsus2 as the chord's 2nd (A) is incorporated.

Example 33B shows a progression of three chords: Am(9), Fsus2, and Gsus2. The notation includes a treble clef staff with notes and a guitar TAB staff with fret numbers.

Chord	Treble Staff Notes	Tab Staff Frets
Am(9)	A2, C3, E3, B2	0 (low A), 5 (C), 2 (E), 0 (B)
Fsus2	F2, G3, C3	0 (low F), 3 (G), 1 (C)
Gsus2	G2, A3, D3	3 (G), 2 (A), 3 (D)

Example 34A

This next example points to the importance of "orchestration." Orchestration is the act of assigning specific parts in a piece of music to specific instruments. When done well, this can add a new dimension to an ensemble. The example that follows demonstrates one way in which a band comprised of two guitars could take advantage of their instrumentation by creating two distinctly different parts. In an effort to maximize the effect of the chords studied previously, these types of extended sounds were played arpeggio style on a guitar using a clean tone so each of their dramatic colors can be distinguished. An additional guitar, with a distorted tone, adds the power chords from which these extended sounds were originally derived. Example 34A is the clean guitar part.

Example 34A is a musical score for a clean guitar part, consisting of four systems of notation. Each system includes a treble clef staff with a 4/4 time signature, a guitar tablature staff with fret numbers, and a chord diagram. The chords are: Asus2, Bsus, Cmaj7, C#m7, D(11), C(9), Am(9), Gsus2, D(9)/F#, F#m11, Fsus2, Esus, E, F#7(11), A(9), B(11), and C#m7. The tablature includes various fret numbers and a 'simile' marking.

System 1: Asus2, Bsus, Cmaj7. Tablature: 2 2 0 0 2 2 0 0 4 4 0 0 4 4 0 0 5 5 0 0 5 5 0 0. Chord diagram: Asus2, Bsus, Cmaj7.

System 2: C#m7, D(11), C(9), Am(9). Tablature: 6 6 0 0 6 6 0 0 4 0 3 0 4 0 3 0 2 0 3 0 2 0 3 0 2 5 0 0 2 5 0 0. Chord diagram: C#m7, D(11), C(9), Am(9).

System 3: Gsus2, D(9)/F#, F#m11, Fsus2. Tablature: 0 2 3 3 0 2 3 0 4 2 0 0 4 2 0 0 3 0 1 0 3 0 1 0. Chord diagram: Gsus2, D(9)/F#, F#m11, Fsus2.

System 4: Esus, E, F#7(11), A(9), B(11), C#m7. Tablature: 2 2 0 0 2 1 0 0 4 3 0 0 4 3 0 0 7 6 0 0 9 8 0 0 0 0 6 6 4. Chord diagram: Esus, E, F#7(11), A(9), B(11), C#m7.

Example 34B

Before you tackle the forthcoming audio example, make sure you understand the following analysis. A side by side comparison of the original “5” chord to the full voicing makes it easier to see exactly how each of the basic chords were transformed. Notice how often the additional notes are the result of allowing open strings to ring that are otherwise muted or avoided when playing just the “power chord.”

- Fig. 1: An A5 becomes Asus2 by adding the 2nd.
- Fig. 2: Depicts a B5 which, with the addition of its 4th, becomes Bsus.
- Fig. 3: By adding the 3rd and 7th to C5, Cmaj7 is created.
- Fig. 4: C#5 becomes C#m7 by adding the minor 3rd and minor 7th.
- Fig. 5: D5/A is completely reworked by eliminating the 5th (A), and adding the major 3rd and the 11th to get D(11).
- Fig. 6: Transform the C5 into C(9) by adding the major 3rd and 9th.
- Fig. 7: A5 becomes Am(9) with the incorporation of the minor 3rd and the 9th.
- Fig. 8: A G5 becomes Gsus2 by adding the 2nd.
- Fig. 9: Add a 2nd to D5 to create Dsus2. Add the 3rd in the bass and the 2nd becomes a 9th resulting in a D(9)/F#.
- Fig. 10: F#5 becomes F#m11 with the addition of the minor 3rd, minor 7th and the 11th.
- Fig. 11: F5 chord is transformed to Fsus2 when the 2nd is included.
- Fig. 12: E5 is expanded into Esus with the addition of that chord's 4th.
- Fig. 13: By replacing the 4th of the previous chord with a 3rd you have an open-position E.
- Fig. 14: F#5 with the addition of the 3rd, the minor 7th and 11th, results in F#7(11).
- Fig. 15: A5 becomes A(9) by adding the 3rd and 9th.
- Fig. 16: B5 becomes B(11) by adding the 3rd and 11th.
- Fig. 17: C#5 becomes C#m7 like Fig. 4.

In the accompanying audio, the “power chords” are played live, with a distorted guitar tone, against a programmed sequencer playing the arpeggiated part.

Fig. 1		Fig. 2		Fig. 3		Fig. 4	
A5	Asus2	B5	Bsus	C5	Cmaj7	C#5	C#m7
T	0	0	0	0	0	0	0
A	2	2	4	5	5	6	6
B	0	0	2	3	3	4	4

Fig. 5		Fig. 6		Fig. 7		Fig. 8	
D5/A	D(11)	C5	C(9)	A5	Am(9)	G5	Gsus2
T	3	3	3	0	0	0	3
A	7	5	2	2	5	5	3
B	5	3	3	0	0	3	3

Fig. 9 Fig. 10 Fig. 11 Fig. 12

D5 D(9)/F# F#5 F#m11 F5 Fsus2 E5 Esus

Fig. 13 Fig. 14 Fig. 15 Fig. 16 Fig. 17

E5 E F#5 F#7(11) A5 A(9) B5 B(11) C#5 C#m7

Example 35

The previous example involved a handful of chords that provide an interesting point of departure from typical "power chord" sounds. However, the progression in which these chords were played functioned more as a vehicle for learning, as opposed to a song-oriented chord cycle. The example that follows incorporates many of the same chords, but more like a real piece of music that could be used as a background to a vocal part, or to accompany a solo. Once again, the power chords were added with distortion while the sequencer plays the second guitar part.

Gtr. 1 (Dist.)

†Asus2 G/B C(9) D(9)/F# Gsus2 Fsus2

f P.M.

*Gtr. 2 (Clean)

Rhy. Fig. 1

mf hold throughout

*Sequencer arr. for gtr.

†Harmony derived from both gtr. parts combined (throughout)

Asus2 G/B C(9) D(11)

P.M. -----| P.M. -----|

T 2 3
A 2 2
B 0 0

2 5 2 3 2 3 5 2 5

(Rhy. Fig. 1) -----|

T 2 0 0 3 3
A 2 0 0 2 3
B 0 0 2 3

4 0 3 0 4 0 4 0 3 0

C#m7 A(9) C#m7 F#7sus B5

T 6 7 6 4 4
A 6 7 6 4 4
B 4 5 4 2 2

Rhy. Fig. 2 -----|

T 6 0 0 6 0 0 6 0 0 4 4
A 6 0 0 6 0 0 6 0 0 4 4
B 6 0 0 7 6 0 0 4 4

1. C#m7 A(9) C#m7 E5 B(11)

P.M. -----

TAB 6 4 7 5 6 4 9 7 6 7 6 4 7 4

(Rhy. Fig. 2)

TAB 6 6 0 0 7 6 0 0 6 6 0 0 9 8 0 0

2. C#m9 E5 B(11) Gtr. 1 Asus2 G/B C(9)

P.M. -----

TAB 8 6 4 9 7 6 7 6 4 7 4 2 2 0 2 3 5

TAB 6 6 0 0 0 0 9 8 0 0

D(11)/F# Gsus2 Fsus2 Asus2 G/B C(9) D(11)

P.M. P.M. P.M.

TAB

2 5 3 3 3 2 5 2 3 2 3 5 2 5

Asus2 G/B C(9) D(11)/F# Gsus2 Fsus2 Asus2 G/B C(9)

TAB

5 7 9 (9) 8 10 9 7 5 7 5 7 7 5 7 7

D(11) w/Rhy. Fig. 2 (Gtr. 2) 2 times C#m7 A(9)

grad. bend

TAB

5 5 7 5 5 8 10 10 9 13 11 9 11 9 8 9 11

C#m7 F#7sus B5 C#m7 A(9)

TAB

7 9 11 9 11 9 11 9 7 9 (9) 0 7 9 7 9 9 11 9 11 9

C#m7 E5 B(11) C#m7 A(9)

TAB

11 13 12 12 14 12 14 14 14 (14) (14) 12 14 12 14 12 16 14 12 16 12 14 16

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C#m7 F#7sus B5 C#m7 A(9)

C#m7 E5 B(11) w/Rhy. Fig. 1 (Gtr. 2) 2 times Asus2 G/B C(9)

D(11)/F# Gsus2 F#sus2 Asus2 G/B C(9)

D(11) Asus2 G/B C(9)

D(11)/F# Gsus2 F#sus2 Asus2 G/B C(9)

w/Rhy. Fig. 2 (Gtr. 2) 2 times

D(11) C#m7 A(9) C#m7 F#7sus B5

TAB: 5 7 7/9 8 8 10 | 6/7 (7) 5 4 | 6 4 6 4 6 8 (9) 8

C#m7 A(9) C#m7 E5 B(11) C#m7 A(9)

TAB: 9 9 6 6 8 8 4 4 6 | 4 6 4 6 4 2 4 | 4/5 4 6 4 5 4 6 4 6 4

C#m7 F#7sus B5 C#m7 A(9)

TAB: 5 4 6 4 7 4 6 4 5 4 6 4 5 4 6 4 | 7 4 6 4 7/9 7 9 12 9 12 11

w/Rhy. Fig. 1 (Gtr. 2) 2 times

C#m7 E5 B(11) Asus9 G/B C(9)

TAB: 9 12 12 14 12 14 16 16 | 17 12 15 15 10 10 12 12

D(11)/F# Gsus2 F#sus2 Asus2 G/B C(9)

TAB: 12 15 12 17 12 15 12 15 12 14 13 12 14 12 14 12 | 12 14 12 10 12 12 12 10 12 14 12 14 13 12

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D(11) Asus2 G/B C(9)

1 1 1/2

15 15 (15) 13 15 (15) 13 15 13 12 13 15 13 12 13 15

D(11)/F# Gsus F#sus2

3 6 6 6 6

13 12 13 15 13 12 13 15 13 12 13 15 13 12 13 13 13 15 13 12

Asus2 G/B C(9) D(11)

1 1 1

13 15 10 (14) 17 17 (17) 17 15 17 19 17 15 15 14 14 14 13 15 12 13 13

w/Rhy. Fig. 2 (Gtr. 2) 2 times

C#m7 A(9) C#m7 F#7sus B5

11/12 9 12 14 14 9 12 11 1/2 9 9 11 9 8 9 11

C#m7 A(9) C#m7 E5 B(11)

6 7 9 7 8 6 6 4 6 4 6 4 2 4

C#m7 A(9) C#m7 F#7sus B5

T
A
B

(4) x 2 4 6 2 6 4/6 4 6 5 4 5 7 5 (5) 7 5 0 7 (7) 9 7 0 9

C#m7 A(9)

T
A
B

(9) 12 9 0 12 9 12 11 11 12 9 11 12 11 9 12 11 9 12 11

C#m7 E5 B(11) Asus2 G/B C(9)

w/Rhy. Fig. 1 (Gtr. 2) 1 1/4 times

T
A
B

9 12 11 10 9 11 9 8 9 11 7 9 11 9 9 11 (11) 8 11 10 12 15

D(11)/F# Gsus2 F#sus2 Asus2 G/B C(9)

T
A
B

(15) 12 15 17 20 1 20 20 20 17 20 17 17 20 17 20 17 20 17 20 19 17 19

D(11) Asus2 G/B C(9)

T
A
B

19 19 17 19 17 17 19 17 15 17 15 17 15 17 17 19 17 16 17